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OTA SPECIAL REPORT

Potential Effects of Section 3 of the Federal Coal Leasing Amendments Act of 1976

CONGRESS OF THE UNITED STATES
Office of Technology Assessment
Washington, D. C. 20510

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FOREWORD

Section 3 of the Federal Coal Leasing Amendments Act of 1976 (FCLAA) forbids the issuance of any new Federal onshore mineral leases to any person or company that owns a Federal coal lease that is not producing coal in commercial quantities and has been held for 10 or more years. This disqualification also applies to all related business entities controlled by or under common control with the noncomplying coal lessee. The potential impacts of section 3 disqualifications extend beyond coal leasing to all Federal onshore mineral leases, and to onshore oil and gas leases in particular.

The first section 3 disqualifications were to begin August 4, 1986, however, a provision in the Continuing Appropriations Resolution for Fiscal Year 1986, Public Law 99-190, delayed the effect of section 3 to December 31, 1986. Legislation to modify the section 3 penalty has been introduced in Congress. But these legislative proposals raise difficult issues involving Federal coal leasing policy, energy supply, and competition.

This OTA special report analyzes the potential effects of section 3 and legislative options for promoting timely production from Federal coal leases. It was prepared at the request of the House Committee on Interior and Insular Affairs. This report draws on information and analyses from OTA's past work on coal leasing including the 1981 report, *An Assessment of Development and Production Potential of Federal Coal Leases*, and the OTA technical memorandum, *Patterns and Trends in Federal Coal Lease Ownership 1950-80*. The information in these reports was updated as needed.

OTA's analysis of alternative legislative options and our assessment of the likely section 3 compliance status of Federal coal lessees should prove useful to the Congress in considering proposals for modifying the production requirements for Federal coal leases.

OTA thanks the many companies, organizations, government agencies, and individuals who assisted us in preparing and reviewing this special report. We particularly acknowledge the special contributions made by the participants in OTA's May 1985 workshop to the analysis of alternative legislative options for amendment or repeal of section 3.

John H. Gibbons.

John H. Gibbons,
Director

OTA Project Staff - Special Report: The Potential Effects of Section 3 of the Federal Coal Leasing Amendments Act of 1976

Lionel S. Johns, *Assistant Director, OTA Energy, Materials, and International Security Division*

Peter D. Blair, *Energy and Materials Program Manager*
Richard E. Rowberg, *Energy and Materials Program Manager (until December 1985)*
Audrey Buyrn, *Industry, Technology, and Employment Program Manager*

Project Staff
Karen L. Larsen, *Project Director and Principal Investigator*

Administrative Staff
Lillian Chapman
Edna Saunders
Sharon Scott
Andrea Amiri

Individual Contractors
J. Russell Boulding
James S. Cannon
David A. Gulley

Contributors

OTA wishes to acknowledge the special assistance of the following individuals:

Gregg Conrad
David Charles Masselli
Bruce Watzman
Norman Williams

WORKSHOP ON SECTION 3 OF THE FEDERAL COAL LEASING AMENDMENTS ACT OF 1976

Sandra Blackstone
Professor of Law
University of Denver
College of Law
Denver, Colorado

Russell Boulding
Environmental and Mining Consultant
Bloomington, Indiana

James Cannon
Consultant
Western Network
Sante Fe, New Mexico

Karl Gawell
Legislative Representative
National Wildlife Federation
Washington, D.C.

Bill Grant
Manager, Government Affairs
Utah International, Inc.
Washington, D.C.

David Gulley
Assistant Professor of Mining
Henry Krumb School of Mines
Columbia University
New York, New York

Tom Hoffman
Director, Federal Government Affairs
Consolidation Coal Company
Washington, D.C.

Lawrence G. McBride
Assistant Solicitor for
Onshore Minerals
Office of the Solicitor
Department of the Interior
Washington, D.C.

Harry Moritz
Chief, Branch of Technical Support
Solid Minerals Operations Division
Bureau of Land Management
Department of the Interior
Washington, D.C.

Dianne Nielson
Director
Division of Oil, Gas & Mining
State of Utah
Salt Lake City, Utah

Steven P. Quarles
Partner
Crowell & Moring
Washington, D.C.

Lynn Walker
Counsel
Mobil Oil Corporation
Denver, Colorado

Geoff Webb
Washington Director
Friends of the Earth
Washington, D.C.

Warren White
State Planning Coordinator
State of Wyoming
Cheyenne, Wyoming

Brooks Yeager
Washington Representative
Sierra Club
Washington, D.C.

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CHAPTER 1

EXECUTIVE SUMMARY

In 1976, concerned over the large number of nonproducing Federal coal leases, Congress amended the Mineral Leasing Act of 1920 (MLA) to prevent the issuance of new onshore mineral leases to any person or company that owns a nonproducing coal lease and has held it for more than 10 years after August 4, 1976.[1] This restriction on the issuance of new leases, found in section 3 of the Federal Coal Leasing Amendments Act of 1976 (FCLAA), applies not only to coal leases, but also to leases for oil and gas and other minerals on Federal lands leased under the MLA. (Federal offshore lands are not leased under the MLA and thus are not affected.) The disqualification attaches to the noncomplying lessee and to any other firms "controlled by or under common control with" the lessee. Under section 3 a major oil company could be barred from competing for Federal oil and gas leases if the oil company's coal mining subsidiary had even one noncomplying Federal coal lease. While there has been a significant increase both in the number of producing Federal coal leases and in the amount of coal produced from Federal reserves in the past decade, over 40 percent of existing Federal leases remain undeveloped. As a result of section 3, some major U.S. energy firms will be ineligible to compete for new onshore Federal mineral leases when section 3 disqualifications take effect unless they sell or relinquish their old nonproducing Federal coal leases.

Legislation to repeal or modify section 3 has been introduced in Congress, but may conflict with a basic policy of FCLAA: that Federal coal leases are to be held only for timely production. As the result of administrative actions by the Department of the Interior, section 3 now is the only penalty that might be imposed on most nonproducing Federal coal leases before the mid-1990s. Following hearings on section 3 legislation in June 1984, the House Committee on Interior and Insular Affairs asked OTA to assess the potential impacts of both enforcement and repeal of section 3 and to examine alternative legislative options for promoting timely development from Federal coal leases.

WHAT DOES SECTION 3 REQUIRE?

As a lessee qualification, section 3 is similar to citizenship requirements and acreage limitations; it does not directly affect the terms or conditions of any existing lease. Section 3 creates a nonproduction penalty only if and when the noncomplying lessee or a related company seeks a new Federal mineral lease. Moreover, section 3 does not restrict the Secretary's approval of lease assignments between private parties nor limit the noncompetitive modification of an existing coal lease to include up to 160 more acres. Enforcement of a section 3 disqualification is nondiscretionary. The Secretary however was given considerable discretion in defining the amount of coal that must be produced to avoid disqualification, i.e. "commercial quantities", and in interpreting the availability of statutory exceptions. The Secretary of the Interior can thus influence significantly the extent of the potential impacts of section 3 enforcement.

OTA has found that Department of Interior guidelines and regulations have made section 3 compliance more difficult for some producing lessees than previously anticipated. OTA believes, however, that Department has ample, though not unlimited, discretion to resolve

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[1] Congress delayed the effective date of section 3 disqualifications to Dec. 31, 1986, in the Continuing Appropriations Resolution for FY 1986, H.J. Res. 465, 99th Cong., 1st sess., Dec. 19, 1985, (Public Law, 99-190).

many of the compliance problems of producing lessees. The Department has very limited discretion to assist lessees with no production. Moreover, the Department's delay in issuing final section 3 policy guidance has left many lessees with less than a year to complete all the administrative steps necessary to avoid disqualification, such as formation of a logical mining unit (LMU), assignment, lease amendment, or relinquishment.

HOW CAN A LESSEE AVOID A SECTION 3 PENALTY?

Section 3 gives a lessee 10 years after acquiring a lease before imposing its nonproduction penalty. A lessee has at least eight options for avoiding a section 3 disqualification: 1) The lessee can produce commercial quantities of coal from the lease which may require mining of up to 1 percent of lease reserves annually from the 10th year on. 2) If there is already some commercial production, the lessee may be eligible to comply by paying advance royalties in lieu of production. 3) If mining has been disrupted because of strikes, the elements, or other casualties not attributable to the lessee, the section 3 production obligation can be suspended under a nondiscretionary statutory *force majeure* suspension provision. 4) The lessee can assign (i.e., sell) the lease to an unrelated party. 5) The lessee can relinquish all or part of the noncomplying lease. 6) Under section 39 of the MLA, the Secretary can suspend lease production requirements in the interests of resource conservation. These discretionary suspensions can not be granted for purely economic reasons, such as lack of markets, but can be used, for example, to defer development while additional environmental studies are done. 7) The noncomplying lease can be combined with producing leases in an LMU and total LMU production can be used to comply with section 3. 8) The lessee can ask the Department to consolidate the nonproducing lease with one or more of the lessee's producing leases to form a single producing lease.

Lessees may encounter several constraints in using these options for compliance with section 3. The Department has decided to limit *force majeure* suspensions and payment of advance royalties only to leases that have been specifically amended by readjustment or voluntary agreement to include higher post-FCLAA advance royalties and production requirements. For policy reasons, current regulations provide that coal leases cannot be assigned to a noncomplying lessee, thus eliminating some potential buyers for nonproducing leases. LMU formation is perhaps the most flexible and powerful compliance mechanism for leases tied to producing mines, however nonstatutory preconditions for LMU approval may make this option unattractive for some lessees. OTA has found at least two producing mines that may not be able to form LMUs to comply with section 3 because of the statutory requirement that all lands included must be contiguous.

WHAT IS THE CURRENT DEVELOPMENT STATUS OF FEDERAL COAL LEASES?

OTA reviewed a total of 648 Federal coal leases for this report. We found that 33 coal leases have been relinquished, exchanged, or consolidated since 1981 leaving 615 Federal coal leases in effect ("existing leases") as of September 1985. Our focus was primarily on the 583 existing leases in seven western states of Colorado, New Mexico, North Dakota, Oklahoma, Utah, and Wyoming, representing 95 percent of the existing leases and over 99 percent of the Federal reserves under lease. There are 32 leases in other states.

Since 1976, there has been a significant increase in the number of Federal coal leases that are producing or are under development. Over 48 percent of western leases and 61 percent of the leased reserves are in or associated with permitted mines. Another 6 percent of leases and 5 percent of reserves are covered by proposed mines now under permit review. About 40 percent of existing leases with 30 percent of the reserves under lease still remain undeveloped, however.

WHAT IS THE LIKELY SECTION 3 COMPLIANCE STATUS OF FEDERAL COAL LEASES?

OTA found that nearly all of the undeveloped leases and some leases within or associated with mines that are permitted or under permit review will face section 3 compliance problems if leases are retained beyond the 10-year holding period. Section 3 disqualifications will initially involve nonproducing leases that were issued before passage of FCLAA.

There are 489 western pre-FCLAA leases with over 16.2 billion tons of reserves. About 330 of these leases have section 3 deadlines in 1986; because of transfers after 1976, section 3 dates for the remaining leases fall over the next 10 years.

OTA estimates that 189 pre-FCLAA leases with 8.3 billion tons of reserves are likely to comply with section 3. Another 56 leases with 1.6 billion tons of reserves have an uncertain status because of insufficient production, lack of contracts for planned production, or the need to obtain LMU approval for non-Federal coal. Many of these 56 leases will eventually comply, however some lessees may be disqualified briefly and others may have to relinquish or sell some lease reserves in order to qualify.

About half of the western pre-FCLAA leases (244 leases with 6.2 billion tons of reserves) are unlikely to be producing in commercial quantities by their section 3 deadlines. Because of probable continued low growth in energy demand and the large inventory of undeveloped lease reserves, most of these 244 leases will not be mined in time to comply with section 3 and other production requirements despite even the most diligent efforts at developing and marketing the coal. The current market outlook suggests that slow growth in western coal demand will continue until the late 1990s. The noncomplying leases include some tracts in areas such as southern Utah and the Star Lake-Bisti area of the San Juan Basin of New Mexico, where coal development is controversial because of potential environmental impacts on National Parks, wilderness areas, and roadless areas.

WHAT ARE THE POTENTIAL IMPACTS OF SECTION 3 ENFORCEMENT?

The effects, or threat, of a disqualification could lead to the relinquishment or sale of noncomplying leases. In fact some recent sales and relinquishments were prompted in part by section 3. Noncomplying leases with unfavorable short-term development potential or poor quality reserves are most likely to be relinquished. Nonproducing leases with better quality reserves and favorable or uncertain development potential will probably be sold to new owners.

The legislative history indicates that section 3 was directed at the nonproducing Federal lease holdings of major oil companies and large energy conglomerates. OTA's analysis indicates that many, but not all, of these lessees will have section 3 compliance problems. Section 3 will have little or no effect on some nonproducing lessees, particularly individuals and companies that are not actively involved in mineral leasing because they are unlikely to seek additional mineral leases.

OTA estimates that as many as 120 of the more than 220 current Federal coal lessees face a potential section 3 penalty. When the holdings of corporate subsidiaries and joint ventures are attributed to the controlling companies, about 70 distinct corporate families and about 20 individuals and other lessees could be disqualified.

The 20 largest Federal coal reserves holders control over 65 percent of the Federal coal reserves under lease. Fifteen of these 20 lessees face potential disqualification because their leases are either uncertain or unlikely to be producing in commercial quantities. It is likely, however, that several of these firms will be able to resolve their compliance problems through LMU approvals, lease assignments, or relinquishments before their section 3 dates. But several major energy company lessees are likely to be disqualified from Federal leasing unless they get rid of their noncomplying Federal coal leases.

Section 3 applies to the issuance of all minerals on Federal onshore lands including coal, oil and gas, oil shale, gilsonite, and fertilizer minerals. If section 3 disqualifications take effect, the number of potential bidders for Federal coal leases and other mineral leases will be reduced creating an incentive for the remaining participants to bid less. This could theoretically reduce the government's ability to capture any increased value in Federal leases due to competitive interest. The impacts on competition for and bonuses for coal leases are likely to smaller than the section 3 noncompliance figures suggest however, because there are normally few bidders for any given coal tract and the statutory fair market value requirement, if strongly administered, can assure that acceptable bids reflect a fair return to the government. It is possible also that fewer new tracts may be leased if the most likely bidders are disqualified. OTA found that coal production is unlikely to be affected for several years, as few producing mines are nearing exhaustion of their Federal reserves and many other producers who will be in compliance with section 3 have excess production capacity available to meet any shortfall.

The overall impacts of section 3 on competition for oil and gas leases also should be minimal. Most Federal oil and gas leases are not awarded by competitive bidding. As a practical matter, many potential oil industry bidders for competitive and "lottery" leases will be unaffected by section 3. It is doubtful that any major oil and gas producer would abandon participation in Federal onshore oil and gas leasing to preserve nonproducing coal leases, particularly since coal typically contributes only a minor share of corporate revenues for such companies. Because noncomplying firms could still acquire oil and gas leases by assignment, the primary adverse impact of any disqualification will be their exclusion from noncompetitive or "over the counter" leasing for lands in previously unleased and unexplored frontier areas.

Section 3 guidelines have been adopted for coal leases, but several major uncertainties remain unresolved. Other leasing programs could be disrupted and lease issuances contested if the Department fails to move quickly and effectively to prepare for the implementation of section 3 for all leasable minerals. The Department has not established procedures for reviewing section 3 qualifications for the thousands of new oil and gas leases issued yearly or to acquire the information needed to make the determinations.

Section 3 could potentially enhance competition in the western coal supply market by transferring nonproducing leases to new entrants. However, these leases could also be sold to existing producers possibly reducing potential competitors for coal supply contracts. Some major energy firms with noncomplying or problem leases may at least temporarily withdraw from western Federal coal leasing by selling or spinning off their coal subsidiaries, or as a last resort, relinquishing their leases, further reducing the number of existing competitors. Once purged of section 3 disqualification, these firms could later reenter western leasing and thus remain as potential new competitors.

As better quality reserves are sold to new owners and poorer quality reserves are relinquished, the amount of undeveloped Federal coal reserves under lease could be reduced, but the overall quality of the remaining inventory in private hands would be improved. Old leases could be turned back and could be sold again if they survive the land use planning, suitability screening, and surface owner consent reviews required of new leases. New leases require payment of a fair market value bonus and higher statutory royalties which might offset any loss in rentals or royalties from relinquished leases. The leases that have been relinquished so far will probably not be reoffered for lease because they generally had poor quality reserves or were located outside of active mining areas.

WHAT IF ANY IS THE IMPACT OF SECTION 3 ENFORCEMENT OR REPEAL ON FEDERAL MINERAL REVENUES?

Repeal or modification of section 3 without imposing substantial payment obligations on nonproducing leases as the price of relief would be a lost opportunity to generate additional revenues from nonproducing leases and, perhaps, to recapture a portion of value of old leases originally sold at very low prices. OTA examined several payment options that might be used as alternatives to section 3 as it currently exists and found that such an approach has some advantages. A payment alternative gives the lessee additional flexibility in deciding how long to hold a nonproducing lease and allows lessees to qualify for additional leases. The payment creates an economic penalty for nonproduction, thus reinforcing basic policies of FCLAA, and has the additional benefit of generating some preproduction revenues for Federal and State governments. The payments could be based on a flat or escalating rate on the acreage, reserves, or minimum production levels or could be a percentage of the value of the coal. A relatively simple payment structure of cents per ton of reserves or dollars per acre offers the advantage of predictability and ease of administration. The payment should be high enough to force some leases to be relinquished and to lessen the assignment values of other leases, thus discouraging potential speculation. **OTA found that a minimum annual payment of at least one cent per ton of recoverable reserves, for example, would measurably affect the economics of holding leases in virtually all coal regions and would provide at least some economic pressure on the lessee to develop or get rid of a nonproducing lease.**

WHAT ALTERNATIVES ARE AVAILABLE TO ENCOURAGE THE TIMELY DEVELOPMENT OF FEDERAL COAL LEASES?

A dynamic Federal leasing system that offers Federal resources to create opportunities for private sector firms to compete for coal supply contracts and thus keep fuel costs low for consumers is highly dependent on a diligence mechanism. Without some means of returning undeveloped tracts to the system, the Government might soon exhaust its supply of marketable tracts and lose its ability to affect the price or supply of coal to consumers. However, section 3 and the current diligence requirements can have harsh consequences on some lessees that have made substantial investments in mine development, but fall short of required production levels. OTA believes that the existing system could be improved by the adoption of provisions that allow more flexibility in the achievement of diligence, while reaffirming the principle that Federal resources are to be held for timely production. For example, as noted previously, properly structured holding fees create an economic incentive to develop a lease and offer greater flexibility than the existing system in avoiding forfeiture of leases that are otherwise economically viable because of unforeseen or unavoidable delays in lease development.

OTA examined various approaches for promoting timely production used in Federal and private coal leases. Examples include minimum annual production clauses, minimum investment or equipment clauses, recoupable advance royalties, minimum annual royalties, and short primary lease terms that can be extended only by production or payment of an additional delay rental. OTA found that the effectiveness of the minimum production and investment requirements in Federal coal leases has been hampered historically by the lack of a prompt and efficient enforcement mechanism. Before 1976, advance and minimum royalties in Federal leases were generally too low to have any effect on the economics of holding the lease. FCLAA sharply increased advance royalties for new and readjusted leases, but this condition is only triggered once the lessee has produced enough coal to satisfy the diligent development obligation. Current advance royalty provisions in Federal leases therefore do not encourage initial development and production, and in some cases may be a deterrent.

OTA looked at the advantages and disadvantages of keeping section 3 unchanged and of a range of alternative legislative options. The possible legislative options for section 3 relief are: repealing section 3, limiting the new lease disqualifications to coal leases only, extending the 10-year holding period, using the attainment of lease development milestones as an alternative to actual commercial production, allowing the payment of holding fees on nonproducing leases instead of production, requiring a turnback of an equivalent amount of old leases to acquire any new leases, and allowing noncomplying leases to be relinquished in exchange for a preferential option to purchase a new lease on the same lands. OTA also analyzed the potential effects of applying the section 3 producing in commercial quantities requirements to all leases that are more than 10 years old, regardless of how long they have been held. Some of OTA's conclusions from its analysis of these options are summarized here.

Leaving section 3 unchanged retains perhaps the only statutory production requirement for most old Federal coal leases, particularly because the Department of the Interior has substantially relaxed, or even nullified, most other production requirements for pre-FCLAA leases. This "no action" option would maintain fairness for lessees who have already relinquished or sold leases in order to comply.

Lessees with leases that are producing or under active development but which cannot satisfy the Department's producing in commercial quantities test would be aided most by three options: an extension of the section 3 deadline; acceptance of qualifying payments in lieu of production; and acceptance of achievement of alternative mine development milestones to comply with section 3.

The lease turnback option is administratively workable only if section 3 is limited to coal leases. Turnback primarily benefits lessees with large amounts of nonproducing acreage or reserves. Turnback offers no relief to lessees who merely need additional time to produce coal and do not have nonproducing leases to relinquish.

Repeal of section 3 or limiting the disqualification to coal leases only would provide the greatest relief from the effects of section 3 enforcement. For some large lessees, limiting section 3 disqualifications to coal leases only would be tantamount to repeal. It is probable that some lessees with very large holdings of noncomplying reserves will have little need for additional Federal coal leases for many years. However, more than two thirds of noncomplying coal reserves are held by lessees who are also actively involved in onshore oil and gas leasing. The threat of disqualification from oil and gas leasing makes section 3 a powerful development incentive for these large energy firms. If section 3 were repealed or limited to coal only, lessees could maintain their existing inventory of leased reserves for later development or sale and compete freely for other Federal mineral resources. These two options remove or lessen the only statutory incentive for the major nonproducing lessees to either begin mining coal from their leases or get rid of them before the mid-1990s when current diligence regulations might be enforced. Given the uncertainty created by Department policies about what diligence requirements are applicable to pre-FCLAA leases and when, if ever, they must be enforced, these options may effectively remove the only restraint on continued holding of these old leases without production. These two options would not promote timely development or limit the potential for speculation in Federal coal were either to be adopted without substantial counterbalancing changes in section 7 diligence requirements for pre-FCLAA leases.

There is now more Federal coal under lease than can be sold or burned within the market areas served by Federal coal within the next two decades and beyond. It is likely that the amount of Federal coal under lease will exceed by a significant margin, the amount of coal expected to be needed by consumers. Many lessees will be unable to comply with lease development and production requirements despite even their most diligent efforts at securing purchasers for their coal. Allowing lessees to retain coal leases indefinitely without development in the same manner that companies might, for example, hold the coal reserves that they own outright, would be equivalent for policy purposes to transferring ownership of these reserves to private parties and runs contrary to the longstanding Federal policy against disposal of public coal resources. For this reason, the Federal leasing program will need some mechanism to determine which leases can continue to be held, and for how long, and which must be returned to the government for possible resale to others. Whether this mechanism will be section 3, the current diligence system, or some other provision is a matter for congressional consideration.

CHAPTER 2

OVERVIEW

In 1976 Congress amended the Mineral Leasing Act of 1920 (MLA) to bar the issuance of any new Federal onshore mineral lease to any person or company that owns a nonproducing coal lease and has held it for 10 years after August 4, 1976. This provision, section 3 of the Federal Coal Leasing Amendments Act of 1976 (FCLAA) (also known as section 2(a)(2)(A) of the MLA)[1], was adopted as a result of congressional concern over the large number of Federal coal leases that were being held without production and the recent acquisitions of Federal coal leases by the major oil companies and other large energy conglomerates. On August 4, 1986, the 10-year section 3 holding period will end for 331 leases and the owners of as many as 197 nonproducing Federal coal leases could be disqualified. Over the next decade the owners of another 103 nonproducing leases could also become ineligible to acquire new mineral leases unless they sell or relinquish their old nonproducing coal leases.

Legislation to repeal or modify the section 3 nonproduction penalty has been introduced in Congress. Section 3 relief legislation has become a high priority for many coal lessees and especially for those with oil and gas operations because of section 3's applicability to Federal onshore oil and gas leases. The Department of the Interior has endorsed repeal or replacement of section 3 with economic penalties. But legislation repealing or modifying section 3 raises a number of difficult issues concerning the management of Federal mineral resources. To allow additional time for consideration of legislation, Congress has delayed the effect of section 3 disqualifications from August 4, 1986 to December 31, 1986.[2]

At the request of the House Committee on Interior and Insular Affairs, OTA has prepared this special report assessing both the potential impacts of enforcement of section 3 and the possible consequences of amendment or repeal. OTA examined the availability and effectiveness of other mechanisms for promoting timely development of Federal coal leases and analyzed a range of possible legislative alternatives for congressional consideration.

In 1976 there were some 533 Federal coal leases with over 16 billion tons of recoverable reserves; only 59 of the leases were being mined. Federal coal production in 1974 was 20.6 million tons, scarcely 3 percent of national production. At the same time, the Federal Energy Administration Project Independence Blueprint report projected that national coal demand in 1980 could grow to 895 million tons under a business as usual scenario and to as much as 1.376 billion tons under an accelerated development scenario. Western coal production was also projected to increase steeply. Thus, when FCLAA was under consideration it appeared that Federal coal reserves, while substantial, were not contributing proportionately to meeting rapidly expanding national energy needs. There was also concern that the benefit of any future increase in the value of the Federal coal reserves would not flow to the Federal Treasury and the States, but would accrue to private lessees who had acquired Federal leases at little or no initial cost and held them without production. As a result of these concerns, FCLAA contains several provisions intended to encourage early production from new Federal leases and to limit the potential for speculative gain. Competitive bidding and payment of fair market value are required for all new leases; any new lease not producing within 10 years will be terminated. Congress dealt with the existing nonproducing leases by restricting the future acquisition of

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[1] Public Law 94-377, 90 Stat. 1083, Aug. 4, 1976, 30 U.S.C. 201(a)(2)(A).

[2] H.J. Res. 465, 99th Cong., 1st sess, Dec. 19, 1985, (Public Law, 99-190).

Federal mineral leases by lessees who did not bring their coal leases into production within 10 years of acquiring the lease. The Department of the Interior also began to enforce statutory development obligations in Federal leases by adopting regulations in 1976 that required all existing Federal coal leases to produce 2.5 percent of lease reserves by June 1, 1986 under threat of cancellation.

In the years since enactment of FCLAA, both the coal leasing program and the market outlook for western coal have changed. The number of producing leases has increased to 118. In 1985, a total of 298 existing Federal leases were in permitted mines or associated with them; but 250 leases still remained undeveloped. Federal coal production in fiscal year 1984 was 104 million tons or about 12 percent of total U.S. production in the same period. Forecasts of greatly expanded western coal demand have been scaled back as plans for new coal fired powerplants and synthetic fuels facilities have been cancelled or delayed. Coal production reached 830 million tons in 1980 and is now projected expected to reach 894 million tons in 1985 by the Energy Information Administration. Actual production levels are well below some projections of the mid-1970s.

The Department of the Interior now favors the maintenance of a large inventory of leased reserves as a hedge against dramatic, unanticipated future increases in coal demand and has accordingly relaxed the 1986 production deadline imposed by regulation on all existing coal leases in 1976. The Department substituted instead, a diligence system that requires old leases to produce 1 percent of recoverable reserves within 10 years of the first lease readjustment after passage of FCLAA shifting the diligent production deadlines for most pre-1976 leases to the 1990s. As a result of administrative actions, section 3 disqualification is now, in effect, the only penalty that might be imposed on most nonproducing pre-FCLAA leases before the mid-1990s absent enforcement of either specific lease minimum production provisions or the more general statutory diligent development requirement. Section 3 is the only statutory requirement that might force the holders of most nonproducing old leases to either mine coal from the leases or to give them up during the next decade.

Section 3 and Production Requirements for Federal Coal Leases

From 1920 to 1976, Federal coal leases were issued for indeterminate periods on the conditions of diligent development and continued operation of the mine or mines under lease. The leases were further subject to the revision or "readjustment" of specific lease terms, conditions, rentals, and royalties at the end of of the initial 20-year term and every 20 years after unless provided otherwise at the expiration of such period. Federal coal leases could be revoked for noncompliance with requirements imposed by statute, lease provisions, or general regulations in force on the date of lease issuance. Revocation was accomplished through cancellation proceedings in Federal district court, an administratively cumbersome and potentially expensive enforcement process for all parties.

In 1976, the law was changed. New coal leases are issued for an initial term of 20 years and may be extended beyond that initial term only for as long as the lease is producing coal annually in commercial quantities. Rentals, royalties and other lease conditions may be readjusted at the end of the 20-year primary term and subsequently every 10 years if the lease is extended. New leases must begin producing within 10 years of lease issuance or the lease is terminated automatically by operation of law. Cancellation proceedings must still be used for violation of other statutory and lease provisions. A new disqualification penalty was added for lessees that held leases for more than 10 years without producing.

WHAT IS SECTION 3 AND WHAT DOES IT REQUIRE?

Section 3 provides that, subject to certain limited exceptions, the Secretary shall not issue a lease under the terms of the MLA to anyone who holds and has held a Federal coal lease for 10 years after August 4, 1976, unless the coal lease is producing in commercial quantities. Section 3 is thus a general qualification provision for Federal onshore mineral leases. The disqualification attaches to the nonproducing lessee and to all entities "controlled by or under common control with" the noncomplying lessee, such as parent or subsidiary corporations, and affiliates. OTA has concluded that section 3 prevents issuance of all new leases for coal and for oil, gas, oil shale, phosphate, potash, sulfur, sodium, or gilsonite on Federal lands (both public domain and acquired lands). Federal offshore oil and gas leases are not affected by section 3 because these leases are issued under the Outer Continental Shelf Lands Act, not the MLA.[3]

Section 3 was directed primarily at "old" leases (leases issued before passage of FCLAA) and particularly at the large nonproducing lease holdings of major oil companies, large coal companies, and other energy conglomerates. The disqualification extends to oil and gas and other mineral leases to deter these firms from holding undeveloped Federal coal leases by threatening their participation in other leasing activities. The legislative history makes clear that the provision was adopted in response to concern that these companies might sit on their leases waiting for the price of coal to go up in the future instead of producing coal from them to meet more immediate energy needs. Passage of FCLAA followed on the first OPEC oil embargo and a doubling of the average domestic price of coal from 1974 to 1976. Real coal prices have remained relatively stable since then.

The Department's 1982 regulations and final guidelines on section 3 and logical mining unit (LMU) formation have made section 3 compliance more difficult for some producing lessees. The delay in issuing guidelines has put lessees at a disadvantage in preparing and getting approval of assignments, relinquishments, and LMUs before the section 3 disqualification will start for many lessees. The Department has effectively created three different section 3 compliance schedules and commercial quantities production levels based on whether or not the lease has been adjusted or amended to include the post-FCLAA production and royalty provisions. While this disparity creates some inequity among nonproducing lessees, it does allow the Department a second chance to amend the leases that were not readjusted to include the statutory royalties and 1982 diligent development terms, provided that the lessee also agrees to the amendment as the price of section 3 compliance.

OTA believes that the Department has ample discretion to allow coal lessees who are actually producing from the lease or LMU to comply with section 3. This discretion is found in interpreting such terms in section 3 as "holds and has held", "producing in commercial quantities", and "controlled by or under common control with" the lessee, and in determining the availability of exceptions in section 7(b). **The Department has only extremely limited discretion to assist nonproducing lessees in complying with section 3.**

Both old leases and new leases are subject to section 3. The threat of disqualification is a strong incentive to develop leases or to transfer them. For most old leases, the 10-year section 3 production deadline will come years before any production requirement imposed under the 1982 diligence system. It is also a backup production requirement for new leases once such leases have met the initial 10-year production requirement and can no longer be terminated. Section 3 could be used to encourage production, assignment, or relinquishment of such leases before the primary 20-year term expires if the leases are not producing and advance royalties can no longer be accepted in lieu of continued operation.

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[3] OTA has also concluded that section 3 would bar the issuance of a preference right lease for coal or other minerals to an applicant with a noncomplying coal lease. OTA's conclusions are in general agreement with those of the Department of the Interior in its Solicitor's Memorandum M-36951, Feb. 12, 1985. The Department has not yet reached an opinion on the effect of section 3 on preference right lease applications or its effect on acquired land leases.

Section 3 "enforcement" is not discretionary. Implementation of section 3 is not contingent on rulemaking or guidelines. If the Department does not move effectively to establish qualification procedures, unsuccessful applicants for oil and gas leases will certainly use DOI's failure to determine section 3 eligibility as one basis for challenging new oil and gas leases even where it is not apparent that the successful applicant in fact holds any coal leases.

Section 3 has already affected the pattern of leaseholdings of some major oil companies and large energy companies. Section 3 has forced some companies to reevaluate their lease inventories and to assign or relinquish some leases with unfavorable short-term development prospects in order to comply.

What Must A Lessee Do To Comply With Section 3?

OTA reviewed the MLA, FCLAA and its legislative history, and Department regulations, guidelines, and other documents to determine the availability of exceptions to the section 3 producing in commercial quantities requirement. We found several statutory provisions that confer extensive, but not unlimited, discretion on the Secretary of the Interior to resolve many of the difficulties that Federal coal lessees may face in complying with section 3. OTA identified at least eight ways for a lessee to avoid disqualification.

1. The lessee can produce coal in commercial quantities from the lease.

"Commercial quantities" is defined by regulation as production of 1 percent of lease or LMU reserves. However "producing in commercial quantities" for section 3 purposes is defined differently depending on whether or not a lease is subject to the 1982 "diligence system" and whether it is part of an approved LMU. Under Department guidelines, section 3 compliance may require production of as much as 1 percent of lease reserves annually or merely "producing toward" 1 percent of lease (or approved LMU) reserves over a period that may be as long as 10 years after the new lease is issued. The use of an inflexible 1 percent as commercial quantities may mean that some producing lessees with very large reserves or that have just started production will not comply with section 3. FCLAA does not define what is meant by commercial quantities, but OTA believes that section 3 requires that the lessee must actually produce some coal from the old lease or LMU before qualifying for a new lease.

2. The lessee can pay advance royalties in lieu of continued operation under section 7(b) of the MLA.

The MLA allows payment of advance royalties in lieu of production to satisfy the statutory requirement of continued operation. This exception is available only if the lessee has already developed the mine and produced commercial quantities of coal to comply with the diligent development requirement and has thus triggered the statutory continued operation obligation. The Department has interpreted this section 3 exception as referring only to advance royalties paid under section 7(b) as amended by FCLAA and thus available only *if* a lease has been readjusted or modified to include the FCLAA advance royalties *and* the lessee has satisfied its diligent development condition by producing. OTA estimates that about 133 pre-FCLAA leases are scheduled for readjustment between August 4, 1976 and August 4, 1986, and might qualify for this exception, but other pre-FCLAA leases would not unless the leases were amended voluntarily to include the FCLAA advance royalties and other requirements. However, as discussed below, not all leases have been effectively readjusted as scheduled. As a result, even fewer than 133 lessees would initially be able to pay advance royalties to comply with section 3.

3. The lessee might obtain a force majeure *suspension of the lease under section 7(b) of the MLA.*

If the lease operations are interrupted because of strikes, the elements or casualties not attributable to the lessee, the diligent development and continued operations obligations can be suspended. The Secretary's approval of a *force majeure* suspension is not discretionary. "Casualties not attributable to the lessee" have not in the past been interpreted to include ordinarily foreseeable risks of doing business, such as ordinary delays in acquiring permits or in delivery of equipment, or the lack of markets. The Department has decided that section 7(b) *force majeure* suspensions as exceptions to section 3 are only available for leases that have been readjusted or otherwise amended to include all FCLAA terms and conditions.[4]

4. The lessee can transfer or assign the lease to an unrelated entity.

If the lease is assigned, the lessee no longer "holds" the lease and the disqualification is lifted. Coal lease assignments become effective following approval by the Department. The assignment must be an arm's-length transaction between the lessee and a new owner that is not controlled by or under common control with the lessee for it to remove the lessee and related business entities from the threat of a section 3 disqualification. If the lessee (or a related entity) later reacquires the lease, the new holding period is added to the previous tenure for section 3 purposes. There may be several mechanisms that would allow the lessee to assign the nonproducing lease, or its producing leases, to another entity while still keeping some interest in the leased Federal reserves and avoiding section 3 problems. The lessee might, for example, convey the lease to a trust or to the firms financing mine development, while retaining the rights to mine the lease under an operating agreement.

5. The lessee can relinquish all or part of the noncomplying lease.

Relinquishments take effect on approval by the Department, however the effective date may be made retroactive to the date the application was filed. As a precondition, all rents and royalties due must be fully paid and the lessee must be in compliance with all terms and conditions of the lease. The regulations provide that the Secretary must find that "relinquishment would not impair the public interest." Examples of relinquishments that might not be in the public interest are where it would result in "high grading," bypass, or wastage of Federal coal, or where abandoned mine workings have not yet been successfully reclaimed in compliance with lease obligations. OTA estimates that at least 44 currently nonproducing leases were mined before passage of the Surface Mining Control and Reclamation Act (SMCRA) and were never permitted. The coal lease terms may perhaps be the only effective reclamation obligations for these disturbed areas. Even after a relinquishment application has been filed on such a lease, it may take several growing seasons to determine if the surface restoration has been sufficient to allow approval of the relinquishment.

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[4] Nondiscretionary force majeure suspensions are still available for unadjusted leases under specific lease provisions and the authority of MLA section 7 in effect when the lease was issued or last readjusted. These suspensions do not however lift the section 3 requirement.

6. The lessee can obtain a suspension of the lease in the interests of conservation under section 39 of the MLA.

The Secretary can suspend operations and production on a lease "in the interests of conservation of the resource" under section 39. During the suspension, the rights and obligations of the lease are held in abeyance. No development or production activities can take place, no rent is due. (FCLAA amended section 39 to provide that it could not be used to suspend or reduce section 7(b) advance royalties.) A section 39 suspension might be justified for a nonproducing lease that would not be mined for a number of years and could not be mined except from the lessee's operation instead of forcing relinquishment to comply with section 3. (In such a situation, LMU formation or an order barring wastage of the leased coal could also be used to prevent the actual bypass of Federal coal.) Suspension allows the lessee to preserve many of the advantages of pre-FCLAA leases. It delays readjustment and the imposition of higher royalties, and extends the section 3 holding period for the length of the suspension. An important restraint is that section 39 suspensions are not available for purely economic reasons alone, such as failure to find a buyer for the coal.

7. The lease can be combined with other Federal leases or non-Federal coal into a producing logical mining unit (LMU).

Under section 5 of FCLAA, production anywhere in an approved LMU can be used to satisfy the production requirements for any Federal leases in the LMU. The Department has determined that LMU production can be used to satisfy the section 3 "producing in commercial quantities" requirement. An LMU can only be approved if it promotes maximum economic recovery of the coal, if all lessees consent, and if the all areas within the LMU are contiguous, can be mined as a single operation, are under the effective control of one operator and total less than 25,000 acres. A public hearing may be required before approval. An LMU mine plan must provide for the LMU reserves to be mined out in no more than 40 years. The Department has imposed additional conditions on LMU formation that may make use of this option unattractive for some lessees.

The Department's section 3 and LMU guidelines and 1982 regulations may make it more difficult than previously anticipated for some producing mines to satisfy the section 3 requirement for all leases within the mine without forming an LMU. The LMU approval includes some additional obligations that some lessees may want to avoid, such as: an apparent requirement to mine at an average rate of 2.5 percent of LMU reserves annually; provisions for cancelling the LMU if that rate is not met; and the relinquishment or segregation of lease reserves excluded from the LMU. It is therefore possible, but not likely in most cases, that some lessees with active mines will not combine nonproducing leases into an LMU for section 3 compliance. These lessees may choose to live with a short-term section 3 disqualification or to relinquish the leases rather than create an LMU.

The statutory requirement that the areas within the LMU must be contiguous may bar LMU formation for a few mining operations. OTA found two mining operations, one in Colorado, one in North Dakota, where noncontiguity might prevent LMU formation for active mines that meet all other LMU requirements and where LMU formation is necessary to comply with section 3. OTA believes that the Secretary probably has sufficient administrative discretion, under section 5 and section 39 for example, to allow the lessees to keep the leases intact and to avoid section 3 noncompliance. The contiguity requirement could in the future present problems in LMU formation in North Dakota because scattered Federal coal tracts are intermingled with larger areas of fee coal. Moreover, mining operations in North Dakota sometimes include several pits that are separated by lands that will not be mined. The amount of Federal land and coal involved, however, is small.

8. The lease can be consolidated with a producing Federal coal lease.

The Secretary of the Interior has general administrative authority over coal leases and could approve the consolidation of two or more coal leases into a single lease in appropriate cases. There are currently no regulations governing this action. OTA notes that lease consolidations have been made in the past and would allow lessees to comply with section 3 without forming an LMU and subjecting a lease to the LMU requirements. There is no requirement for notice or public hearings for a lease consolidation.

How Has the Interior Department's Implementation of Section 3 Guidelines Affected the Ability of Companies to Comply With Section 3?

The Department of the Interior has contributed to the potential adverse impacts of section 3 on Federal coal lessees by making it more difficult for many lessees to understand and comply with section 3 within the time remaining before August 4, 1986 (or by December 31, 1986, the delayed effective date of disqualifications). Proposed guidelines on section 3 were not published until February 1985, and related guidelines on LMU formation were not proposed until April 1985. The final guidelines were issued, largely unchanged in September 1985. The Department's delay has left many lessees less than a year to apply for and obtain approval of any administrative actions needed to comply with section 3, such as lease relinquishments, assignments, suspensions, and LMU approvals.

The Department has made compliance more difficult for some producing lessees by limiting the availability of statutory exceptions, and interpreting the producing in commercial quantities requirement as a kind of additional continuous production requirement of 1 percent per year for some lessees, while giving others up to 10 years to produce 1 percent of reserves. Under the guidelines, the section 3 production bracket for some lessees could extend up to 10 years after a new lease is issued. The Department has tied the availability of section 3 exceptions and its definition of producing in commercial quantities to whether or not a lease has been readjusted to include the 1982 diligence regulations. Lessees who have held nonproducing leases for 10 years are treated differently on this basis. This distinction is not found in section 3, but is probably within the Secretary's discretion in implementing the law.

Conditions placed on approval of LMUs and penalties for LMU failure are disincentives for some lessees to form LMUs. These requirements in the 1982 regulations and LMU guidelines, in OTA's opinion, go beyond what is required by section 5 of FCLAA for LMU formation, but are fully within the discretion accorded to the Secretary in implementing the law. LMU approval is an extremely powerful and flexible tool for promoting the most efficient development of Federal coal reserves and for resolving any difficulties created by different lease provisions for Federal lands in the LMU.

Several important issues in section 3 enforcement have been left unanswered. The Department has failed to define how it will interpret "controlled by or under common control with" language of section 3 to determine when the 10-year holding period begins and ends and what affiliated firms might be precluded from acquiring leases. This is particularly important for leases that are held by companies that were acquired by and subsequently merged into other companies. There have been more than 16 corporate acquisitions involving more than 150 leases since 1976. The Department has merely advised that "common principles of corporate law" would apply to determining control and that only 100 percent arm's-length assignments would restart the section 3 clock. This suggests that corporate acquisitions would not restart the section 3 clock for the acquired lessee, and that a subsequent merger, or reassignment of the leases to the acquiring corporation would also not restart the clock. The Department has not suggested how section 3 would be applied to the sale or spin off of a coal leasing subsidiary to an independent company. OTA believes that the section 3 clock would not be restarted in such a case under the suggested interpretation.

The concept of "control" was included in section 3 and in the MLA's coal lease acreage limitations to prevent these restrictions from being avoided by devices of corporate and other business organization. The Department however has not clarified whether it will apply the same attribution principles used for acreage limitations for section 3 purposes. The Department has not yet indicated how it will determine control for other noncorporate business entities that hold leases, such as partnerships and various kinds of business trusts. The Department intends to make "control" determination on a case by case basis that, at present, will leave some non-coal lessees unsure about their section 3 compliance status.

Several major leaseholding corporations own stock in nonsubsidiary companies that also hold Federal coal leases. The Department has not offered any clear guidance on when stock participation might impose a section 3 disqualification on the stockholder lessee or on the nonsubsidiary/affiliate. For example, Chevron owns Gulf Oil Corp. and more than of 20 percent of AMAX, and the Williams Companies own Western Slope Carbon, a coal lessee, and over 30 percent of Peabody Holding Co. If control is interpreted as stock ownership and the ability to dictate the affairs of the company, 20 percent would in many companies give the holder substantial influence over the company, but not dictatorial control. How and when section 3 sanctions might apply to the companies involved is still apparently unresolved. Ownership of 10 percent or less of corporate stock has been interpreted as a "controlling" interest for purposes of disclosure on corporate qualifications statements and calculating total allowable acreage holdings. In the absence of any published Interior Department guidance on this matter, OTA did not attribute noncompliance status to stockholders of a corporate lessee except for wholly owned subsidiaries or joint ventures involving two or three companies. OTA believes however that the Department could, but may not be required to, find control for section 3 purposes in stock ownership above a minimal amount, such as for example 5 percent of a publicly traded company.

If the conclusions are changed on how section 3 holding periods and control are to be determined, the compliance deadlines for some major lessees are extended significantly. If DuPont's acquisition of Conoco (parent company of Consolidation Coal Co.) restarts the section 3 clock, Consolidation Coal Co. will have a section 3 deadline in 1991 instead of 1986. Gulf Oil, which owns Pittsburgh and Midway Coal Co., bought Kemmerer Coal Co. from the Lincoln Corp. in 1981. Kemmerer was then dissolved and its major assets, including its coal leases, were distributed to its shareholder Gulf Oil Corp. The lease title records reflect the assignment to Gulf Oil Corp. However, at the time of the transfer, (as best we can determine) this was not an arm's-length transaction between independent entities because Gulf owned all of Kemmerer. In 1984 Chevron acquired Gulf, which is now being merged into Chevron. Will Chevron be charged with Kemmerer's section 3 holding period and be disqualified from obtaining Federal oil and gas leases because of the nonproducing leases that Gulf acquired with Kemmerer? We think that is the proper result, because of the nature of the assignments transferring title to the leases. If corporate acquisitions are viewed as restarting the section 3 clock however, Chevron, and one would assume its subsidiary Gulf, would not face a possible section 3 penalty until 1992 when the 10-year holding period ends for Chevron's 50 percent interest in a Montana lease.

DILIGENT DEVELOPMENT AND OTHER PRODUCTION REQUIREMENTS FOR FEDERAL COAL LEASES

The expectation of a profit to be made from mining and selling coal is clearly the most powerful incentive for any lessee to develop a mine, however, there are times when nondevelopment may be economically preferable. For example, if the lessee expects the price of coal to increase, deferring production might offer the potential of greater profits later. In other instances, low growth market conditions and an excess of capacity in existing mines may significantly reduce the probability that a lessee can successfully find a buyer for the coal if development proceeds without an assured contract. A risk-averse lessee may prefer to wait until the perceived probability of success improves. But the lessor's interest may not be served by this delay if receiving royalty payments from production is the lessor's major benefit from the lease. Early production or return of the lease so it can be sold to another who might be more successful at developing a mine and generating revenues would be more advantageous to the lessor. The public interest is also served by encouraging more development so that competition among coal suppliers will tend to keep fuel prices low. To protect the economic interests of the lessor and to balance them against those of the lessee, the legal concept of diligent development of mineral leases arose.

Mineral leases under Federal law and common law contain either an express or implied promise that the lessee will make a reasonably "diligent" effort to develop and market the mineral under lease so that production royalties will be paid to the lessor. These "diligence" provisions come in many forms and are intended to protect the interests of the lessor by encouraging production or forcing relinquishment of a nonproducing lease. Not all leases require actual production as evidence of the lessee's diligence, however. For example, some leases allow the lessee to keep the lease by paying a holding fee instead of producing. Such a payment requirement does not however relieve the lessee indefinitely of all obligation to develop the lease. Other examples of diligence requirements are minimum production and minimum investment conditions, advance or minimum royalties, and short primary lease terms. OTA found that many of the same diligence conditions used in private leases have also been used in Federal coal leases. The effectiveness of these provisions in Federal leases has historically been hampered by lack of prompt and efficient enforcement methods.

The diligence requirement for Federal coal leases is found in section 7 of the MLA. Originally and in its current amended form, section 7 provides that every Federal coal lease is held under the conditions of diligent development and continued operation of the mine or mines on the lands under lease. Section 7 originally imposed no time limit for development, but a lessee who failed to develop the lease could be sued for violation of the statutory requirement and the lease forfeited. Federal coal leases until the mid-1970s typically included a provision requiring minimum production to begin in the fourth or sixth year of the lease. The minimum production obligation could be waived on payment of advance royalties with the approval of the Secretary. These advance royalties were usually equal to and credited against the annual rental so that no additional payment was required to delay production. There was no statutory or lease provision that authorized waiver of the diligent development condition by payment of advance royalties, however. OTA found some evidence that lessees were reminded of the diligence obligation as late as the early 1960s, but there is no record of any lessee actually being sued for nonproduction. This was, perhaps, because cancellation required the Attorney General to sue the lessee in Federal district court, a relatively costly and time-consuming process. In FCLAA, diligence requirements were made more stringent. New Federal coal leases must begin producing within 10 years of issuance or they are terminated. Lease suspensions and LMU formation are probably the only exceptions to the new statutory diligent production provision.

Section 3 is effectively an "independent" diligence requirement because it creates an incentive to produce from the lease or get rid of it. But, section 3 is different from other diligence provisions in that it is not a term or condition of a lease and does not directly impose any penalties on a lessee unless a new lease is sought. (To avoid confusion in this report, when we refer to diligence obligations, we mean the requirements imposed under section 7 of the MLA and not the production requirement of section 3.)

The effectiveness of current diligent production requirements for old or pre-FCLAA coal leases is now uncertain, largely as the result of a more than 20-year history of nonenforcement of existing lease provisions by the Department and the 1982 relaxation of 1976 regulations which would have required most old leases to be producing by 1986 under threat of cancellation. The 1982 diligence regulations provide that pre-FCLAA leases are governed by the production provisions in the lease until the lease is readjusted or voluntarily amended to include the new terms required by FCLAA and the "1982 diligence system". The 1982 regulations require production of commercial quantities (defined as 1 percent of lease reserves) within 10 years of the first post-FCLAA lease readjustment. Similar diligence requirements are applied to LMUs. Under the 1982 system, old leases thus face production deadlines between 1987 and 2007, and in some cases later, depending on when and whether the Department readjusts the leases.

There are two major weaknesses in the 1982 diligence system as currently administered. First, it is almost entirely dependent on timely and effective readjustment of pre-FCLAA leases. Second, the current lease form does not include specific production amounts or deadlines, but merely states that the lessee must satisfy diligent development and continued operations requirements as defined in applicable regulations (which can be changed). This enforcement scheme thus suffers from many of the same infirmities that the Department attributed to the 1976 regulations that, ostensibly, required the 1982 rules changes, such as, lack of specific lease production obligations and potential modification of lease terms through changes in regulations.

OTA has learned that the Department has failed to adjust in an effective or timely manner an undetermined number of more than 130 leases that were scheduled for readjustment since FCLAA. The Department in some cases failed to send required notices on time, or attempted to readjust the leases several years after the scheduled readjustment dates. Some lessees consented to the changes and did not contest the readjustments. Other lessees however appealed the decisions administratively to the Interior Board of Land Appeals (IBLA) (a special hearings board established by and acting for the Secretary of the Interior) and to the Federal courts. Some of the attempted readjustments were reversed or sent back to the Bureau of Land Management for review. As a result, the leases involved were not conformed to the FCLAA requirements or to the 1982 diligence system. In September 1981, then Interior Solicitor William Coldiron issued an opinion that coal leases are only "subject to" adjustment under the MLA and that the Secretary is not therefore required to readjust any leases at the end of their current terms to include FCLAA provisions. (It is and has been the Department's policy to do so, however.) Under this interpretation, if the Department either fails or declines to readjust a pre-FCLAA lease, none of the provisions of FCLAA are made applicable to the old lease, and the lease could continue under the old royalty provisions for another 10 years, and in some cases 20 years. To date the Secretary has not reviewed the decisions of IBLA reversing the readjustments. There also appears to be no institutional mechanism for the Bureau of Land Management or others to appeal decisions of IBLA reversing lease readjustments.[5] These readjustment decisions have important implications for future enforcement of diligence provisions, but more significantly in the case of producing leases, they could result in the loss of millions of dollars in increased production royalties to the Federal Government and the States.

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[5] Under the MLA, each public land State, except Alaska, receives 50 percent of the revenues from mineral lease sales, rentals, and royalties on Federal lands in the State. (Alaska receives 90 percent of mineral leasing revenues from Alaska Federal lands.) The States obviously have a significant financial interest in lease readjustments. They are not, however, currently parties to cases involving readjustments and, thus, may have no notice or opportunity to appeal reversals.

OTA has previously analyzed the prospects that lessees will comply with the diligent development requirements imposed by the 1982 regulations.[6] We did not however analyze how the problem with lease readjustments might affect these results. This analysis included 502 leases in Colorado, Montana, New Mexico, North Dakota, Utah, and Wyoming. OTA found that:

o 272 leases with 11.4 billion tons of reserves are likely to meet the 1 percent diligent production requirement by the end of the new individualized diligence period;

o 169 leases with 4.5 billion tons of reserves face uncertainties in meeting the 1 percent production requirement at the end of the new individual diligence periods; and

o 61 leases with 0.5 billion tons are unlikely to satisfy the diligent development requirements of the 1982 regulations.

The 1982 regulations made it more likely that pre-FCLAA leases would comply with diligence obligations by reducing the amount of coal required to be produced and extending the production deadlines from 1 to 20 years from the June 1, 1986 deadline imposed under the prior 1976 regulations. Unlike the 1976 regulations, the 1982 diligence system does not provide discretionary extensions to the diligence deadline for lessees who have very large mines, difficult mining conditions, or unanticipated problems or delays in mine development. Continuation of current low growth trends in western coal markets may make compliance more unlikely for some leases that OTA classified as uncertain in our 1983 analysis.

Federal Coal Leases and Section 3 Compliance

WHAT IS THE DEVELOPMENT STATUS OF FEDERAL COAL LEASES?

In preparing this report, OTA reviewed a total of 648 Federal coal leases, including all leases currently in effect and leases that have been relinquished or exchanged since 1980.[7] Our major focus was on the 616 leases in the States of Colorado, Montana, New Mexico, North Dakota, Oklahoma, Utah, and Wyoming. We also looked at the 32 leases in other States (Alaska, Alabama, California, Kentucky, Oregon, Pennsylvania, Virginia, and Washington). Table 1 shows the distribution and the current development status of the leases reviewed.

There are 298 leases with approved mine plans. This represents about 48.8 percent of the 616 leases in western States and over 60 percent of total leased reserves in these States. Most of these leases are either producing or associated with active mining operations. There are also several permitted mines that either have not yet begun commercial operations or are temporarily idled because of market or other conditions. (See table 2.) Total reported production from Federal coal leases was 104 million tons in fiscal year 1984.

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[6] See statement of Karen L. Larsen, Senior Analyst, Office of Technology Assessment, before the Subcommittee on Mining, Forest Management, and Bonneville Power Administration of the House Committee on Interior and Insular Affairs, June 7, 1983, at 13.

[7] OTA's December 1981 report, An Assessment of Development and Production Potential of Federal Coal Leases, analyzed the status of Federal coal leases then in effect and was the starting point for our analysis in this study.

TABLE 1

DEVELOPMENT STATUS OF FEDERAL COAL LEASES
(ALL LEASES, ALL STATES IN OTA DATABASE)
AUGUST 1985

STATE	DEVELOPMENT STATUS	NO. LEASES	%	ACRES	%	RECOVERABLE RESERVES	%
Colorado							
	Approved	81	55.1%	88,155	52.6%	1,153	43.6%
	Pending	6	4.1%	20,891	12.5%	136	5.1%
	Undeveloped	54	36.7%	55,246	33.0%	1,295	48.9%
	Relinquished	6	4.1%	3,355	2.0%	62	2.4%
	Subtotal	147		167,647		2,646	100%
Montana							
	Approved	19	70.4%	35,548	79.6%	974	59.9%
	Pending	2	7.4%	1,198	2.7%	150	9.2%
	Undeveloped	6	22.2%	7,893	17.7%	503	30.9%
	Relinquished	0	0.0%	0	0.0%	0	0.0%
	Subtotal	27		44,639		1,627	100%
New Mexico							
	Approved	17	54.8%	33,275	72.6%	314	66.9%
	Pending	1	3.2%	2,044	4.5%	60	12.8%
	Undeveloped	12	38.7%	9,287	20.3%	75	15.9%
	Relinquished	1	3.2%	1,240	2.7%	21	4.5%
	Subtotal	31		45,846		470	100%
North Dakota							
	Approved	16	76.2%	15,198	79.2%	220	82.7%
	Pending	0	0.0%	0	0.0%	0	0.0%
	Undeveloped	4	19.0%	3,914	20.4%	46	17.2%
	Relinquished	1	4.8%	80	0.4%	0	0.0%
	Subtotal	21		19,192		266	100%
Utah							
	Approved	77	35.2%	95,548	30.1%	1,210	34.6%
	Pending	20	9.1%	23,885	7.5%	300	8.6%
	Undeveloped	108	49.3%	174,841	55.1%	1,645	47.1%
	Relinquished	14	6.4%	22,844	7.2%	341	9.8%
	Subtotal	219		317,118		3,496	100%
Wyoming							
	Approved	82	68.3%	166,884	64.2%	8,323	74.4%
	Pending	3	2.5%	3,580	1.4%	268	2.4%
	Undeveloped	26	21.7%	78,242	30.1%	2,387	21.3%
	Relinquished	9	7.5%	11,438	4.4%	216	1.9%
	Subtotal	120		260,144		11,194	100%
Oklahoma							
	Approved	6	11.8%	8,666	10.6%	6	2.9%
	Pending	3	5.9%	4,900	6.0%	15	7.4%
	Undeveloped	40	78.4%	66,851	82.0%	179	89.5%
	Relinquished	2	3.9%	1,120	1.4%	0	0.0%
	Subtotal	51		81,537		201	100%
Total West							
	Approved	298	48.4%	443,274	47.4%	12,200	61.3%
	Pending	35	5.7%	56,498	6.0%	928	4.7%
	Undeveloped	250	40.6%	396,274	42.3%	6,130	30.8%
	Relinquished	33	5.4%	40,077	4.3%	641	3.2%
	Subtotal	616		936,123		19,899	100%
Other States							
East	not determined	24		17,868		64	
Other West	not determined	8		9,173		39	
	Subtotal	32		27,041		103	
Total All Leases		648		963,164		20,003	

NOTE: All reserves in millions of tons.

SOURCE: Office of Technology Assessment

Table 2

PRODUCTION STATUS OF FEDERAL COAL LEASES
IN SEVEN WESTERN STATES

		Total			In Permit		Outside Permit	
Development Status	Production Status	No. Leases	Acres	Reserves	No. Leases	Acres	No. Leases	Acres
Approved Permit	Producing	226	333,277	9,676	190	288,094	36	45,183
	Mined Out	8	12,908	12	8	12,908	0	0
	Inactive	39	50,644	515	34	42,745	5	7,899
	Contracts	6	14,679	1,226	6	14,679	0	0
	No Contracts	19	31,766	806	19	31,766	0	0
	Subtotal	298	443,274	12,236	257	390,192	41	53,082
Pending Permit	Contracts	4	6,944	75	4	6,944	0	0
	No Contracts	31	49,544	835	26	33,108	5	16,446
	Subtotal	35	56,498	928	30	40,052	5	16,446
Undeveloped	No Production	206	366,785	5,863				
	Past Prod.	44	29,489	267				
	Subtotal	250	396,274	6,130				
TOTAL		583	896,046	19,294				

All reserves in millions of tons.

NOTE: Totals exclude leases that have been relinquished and 32 leases outside of the seven Western States. Individual column entries may not add to totals because of independent rounding.

SOURCE: Office of Technology Assessment

There are 35 leases with 928 million tons of reserves in mine plans undergoing active permit review in 1984-85. Thus, by 1985, 333 leases, over half of the western leases, and over 65 percent of leased reserves had an approved or pending mine plan. Not all leases that are permitted or have submitted a mine plan will necessarily be mined. Mine development or operations may be reduced, deferred, or abandoned if mining conditions become uneconomic or there are no customers for the coal produced.

There are 250 undeveloped leases with about 6.1 billion tons of recoverable reserves. These undeveloped leases include a significant number of leases on which little or no development activity has taken place and 44 leases that were mined before SMCRA and may not yet be reclaimed.

OTA found that 33 leases with over 640 million tons of reserves have been turned back through relinquishments, exchanges or consolidation since 1981 and are no longer in effect. For the most part, the relinquished leases had poor short term development potential and were unlikely to be mined because the amount or quality of the reserves, or the location made them uncompetitive in today's market. There are some additional relinquishments awaiting approval which are not included in this category. Exchanges sometimes resulted in the issuance of new leases to replace the lands turned back. (In this report, we generally refer to all leases that have been turned back for whatever reason as "relinquished.")

HOW MANY FEDERAL COAL LESSEES WILL COMPLY WITH SECTION 3?

Excluding the 33 relinquished leases, there remain 489 pre-FCLAA western leases that, theoretically, could create section 3 disqualifications for their owners in 1986 and after. (Table 3 shows the development status of pre-FCLAA leases in the seven major western coal States.) These "old" or "pre-FCLAA" leases are the ones most likely to impose a section 3 disqualification penalty on the lessee. (A post-FCLAA or "new" lease terminates if is not producing 10 years after it is issued, so few of these leases will survive to cause later section 3 problems.)

Table 3
DEVELOPMENT STATUS OF PRE-FCLAA LEASES
IN SEVEN WESTERN STATES
AUGUST 1985

STATE	DEVELOPMENT STATUS	NO. LEASES	%	ACRES	%	RECOVERABLE RESERVES	% .
Colorado							
	Approved	60	55.0%	72,934	60.2%	921	48.5%
	Pending	3	2.8%	6,162	5.1%	12	0.6%
	Undeveloped	46	42.2%	41,973	34.7%	967	50.9%
	Subtotal	109	100%	121,069	100%	1,900	100%
Montana							
	Approved	11	61.1%	29,303	80.7%	805	62.9%
	Pending	2	11.1%	1,198	3.3%	150	11.7%
	Undeveloped	5	27.8%	5,797	16.0%	325	25.4%
	Subtotal	18	100%	36,298	100%	1,280	100%
New Mexico							
	Approved	15	55.6%	28,491	71.8%	218	61.9%
	Pending	1	3.7%	2,044	5.2%	60	17.0%
	Undeveloped	11	40.7%	9,127	23.0%	74	21.0%
	Subtotal	27	100%	39,662	100%	352	100%
North Dakota							
	Approved	11	73.3%	12,449	76.1%	187	80.3%
	Pending	0	0.0%	0	0.0%	0	0.0%
	Undeveloped	4	26.7%	3,914	23.9%	46	19.7%
	Subtotal	15	100%	16,363	100%	233	100%
Utah							
	Approved	65	35.3%	78,916	32.7%	1,123	39.0%
	Pending	19	10.3%	23,245	9.6%	300	10.4%
	Undeveloped	100	54.3%	139,213	57.7%	1,460	50.6%
	Subtotal	184	100%	241,374	100%	2,882	100%
Wyoming							
	Approved	68	73.1%	141,437	69.5%	7,334	78.3%
	Pending	3	3.2%	3,580	1.8%	268	2.9%
	Undeveloped	22	23.7%	58,514	28.7%	1,768	18.9%
	Subtotal	93	100%	203,531	100%	9,371	100%
Oklahoma							
	Approved	5	11.6%	8,526	11.7%	6	3.2%
	Pending	3	7.0%	4,900	6.7%	15	8.0%
	Undeveloped	35	81.4%	59,596	81.6%	163	88.8%
	Subtotal	43	100%	73,022	100%	184	100%
All West							
	Approved	235	48.1%	372,056	50.9%	10,594	65.4%
	Pending	31	6.3%	41,129	5.6%	804	5.0%
	Undeveloped	223	45.6%	318,134	43.5%	4,803	29.6%
	TOTAL	489	100%	731,319	100%	16,201	100%

NOTE: All reserves in millions of tons

SOURCE: Office of Technology Assessment

OTA projected section 3 compliance for the 489 western pre-FCLAA leases still in effect. These results are shown in table 4. About 331 leases have a section 3 deadline of August 4, 1986; because of lease assignments, section 3 dates for the remaining leases fall between August 5, 1986 and about January 1995 (assuming that the current lessees do not sell or relinquish the leases before the section 3 dates). Table 5 shows the major reasons why leases will or will not comply with the section 3 production requirement.

OTA found that there are 189 leases with 8.3 billion tons of reserves that are likely to comply with section 3. At least 169 of these leases are in mines currently producing at an average rate of 1 percent or more of reserves per year. Another 13 leases with 1.6 billion tons of reserves will be producing in commercial quantities at the end of their 10-year holding periods. Seven pre-FCLAA leases in permitted operations have already been mined out and are probably under reclamation. In classifying leases as producing, OTA assumed that a lessee would form an LMU if necessary to continue to qualify for new Federal mineral leases.

OTA estimates that 244 leases with over 6.2 billion ton of reserves will not comply with the section 3 producing in commercial quantities requirement. Lack of markets is the dominant reason why 178 noncomplying leases with over 4 billion tons of reserves are not likley to be in production. Another 13 leases with 1.2 billion tons of reserves are suitable only for onsite uses, such as power generation or synthetic fuels production. Unfavorable development potential was the reason why 53 leases with 900 million tons of reserves will not comply.

TABLE 4

SECTION 3 DATES FOR PRE-FCLAA FEDERAL COAL LEASES
IN THE SEVEN WESTERN STATES

SECTION 3 DATE*	SECTION 3 COMPLIANCE	NO. OF LEASES	ACRES	RESERVES**
Aug. 4, 1986	In Compliance	134	228,477	7,491
	Uncertain	27	42,307	942
	Noncompliance	170	247,404	5,035
	Subtotal	331	518,188	13,468
Aug. 5, 1986 to Aug. 4, 1991	In Compliance	23	21,715	293
	Uncertain	10	18,457	344
	Noncompliance	39	57,904	536
	Subtotal	72	98,076	1,173
After Aug. 4, 1991	In Compliance	32	41,934	522
	Uncertain	19	34,390	355
	Noncompliance	35	38,731	683
	Subtotal	86	115,055	1,561
	TOTAL	489	731,319	16,201
	In Compliance	189	292,126	8,306
	Uncertain	56	95,154	1,641
	Noncompliance	244	344,039	6,254

NOTES:
All reserves in millions of tons
* Section 3 date is earliest section 3 date for lease, if there is more than one lessee.
** Total recoverable reserves include pre-FCLAA reserves only; total reserves may include some associated reserves with later section 3 dates because reserves data were sometimes not available on a lease by lease basis.

SOURCE: Office of Technology Assessment

OTA found 56 leases with 1.6 billion tons of reserves where compliance was uncertain because of potentially insufficient production levels, delays, or the need to combine Federal leases in an LMU with non-Federal coal. Under current DOI guidelines and regulations, some of these lessees may have to relinquish a portion of their Federal lease reserves or agree to amended lease terms in order to comply with section 3. We believe that most of these lessees will eventually be able to satisfy the producing in commercial quantities requirement and avoid any extended disqualification.

The section 3 penalties will not be imposed at the same time on nonproducing lessees. OTA estimates that as many as 197 leases are either uncertain or unlikely to comply with section 3 on August 4, 1986, thus disqualifying their owners from further new leasing. (See table 4.) Another 103 nonproducing leases were acquired by the current lessees by assignments after FCLAA and thus have later section 3 deadlines: 49 leases have section 3 dates between August 5, 1986 and August 4, 1991 and 54 leases have section 3 deadlines after August 1991. Section 3 disqualifications attach to lessees not leases. These 300 leases in the uncertain or unlikely to comply categories are held by about 120 different leaseholders. If leaseholdings are attributed back to parent corporations and joint ventures, about 87 separate entities are affected.

TABLE 5

REASONS FOR PROJECTED SECTION 3 COMPLIANCE STATUS
FOR PRE-FCLAA LEASES IN SEVEN WESTERN STATES

STATUS	LEASES	%	ACRES	%	RESERVES	%
Likely to Comply	189	38.7%	292,126	39.9%	8,306	51.3%
Producing commercial quantities	169	34.6%	248,364	34.0%	6,686	41.3%
Will produce commercial quantities	13	2.7%	30,994	4.2%	1,610	9.9%
Reserves "mined out"	7	1.4%	12,768	1.7%	10	0.1%
Uncertain to Comply	56	11.5%	95,154	13.0%	1,641	10.1%
Limited coal demand	35	7.2%	64,066	8.8%	978	6.0%
Non-Federal LMU approval required	21	4.3%	31,088	4.3%	663	4.1%
Unlikely to Comply	244	49.9%	344,039	47.0%	6,254	38.6%
Limited coal demand	178	36.4%	266,980	36.5%	4,085	25.2%
Suitable for onsite use only	13	2.7%	19,093	2.6%	1,264	7.8%
Unfavorable development potential	53	10.8%	57,966	7.9%	905	5.6%
TOTAL	489	100.0%	731,319	100.0%	16,201	100.0%

All reserves in millions of tons.

SOURCE: Office of Technology Assessment

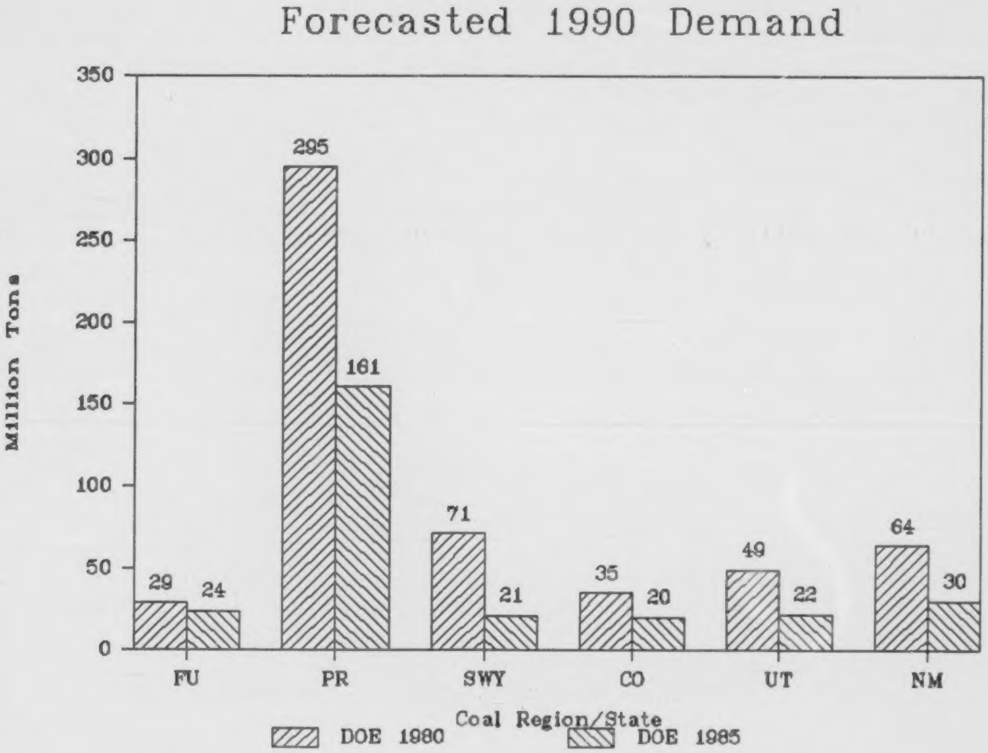
IS 10 YEARS ENOUGH TIME TO BRING A MINE INTO PRODUCTION?

A central element in the reasonableness of both section 3 and the section 7 diligent development requirement is that the lessee has sufficient time to develop the mine and thus comply with the statutory obligations. OTA has previously testified that 10 years provides enough time to bring a lease into production if the question is limited to technical constraints. There is ample time within 10 years to conduct the necessary reserves delineation, environmental baseline studies, mine plan design and preparation, permitting, and construction and to initiate commercial operations (production of coal at a more or less continuous rate for sale or captive use). From lease acquisition or the decision to develop an existing lease, OTA found that an average of about seven years is necessary to bring a large mine into **initial** commercial operation; less time is needed for small mines. More time is needed to reach **full** mine capacity. Timing of that scale up is related to the design of the individual mine and the requirements of the operator's coal supply contracts. OTA found that it is feasible to acquire a lease and to develop a mine and initiate production in amounts necessary to satisfy current diligent production and continued operations requirements within the allotted 10 years and many existing mines have in fact done so. The 10-year period thus is a reasonable, but tight schedule for mine development except in very unusual circumstances, such as very large mines with complex mining conditions, or mines that are essentially captive to an associated powerplant or synthetic fuels facility. We note that when FCLAA was under consideration, Department of the Interior experts advised the congressional committees that from 3 to 5 years were needed to bring a lease into production.

Technical considerations are not the only relevant consideration in deciding on the appropriateness of a 10-year production deadline. Perhaps the question might be rephrased for policy purposes as how long should a Federal coal lessee reasonably be allowed for marketing the coal under lease?

Ten years may not be enough time for markets to develop to allow all coal lessees to develop their leases profitably. Given the current excess of reserves over the amount of coal to meet long term demand, even the better tracts may not be brought into production in 10 years. Indeed, if policies persist which favor aggressive leasing of Federal coal to assure competition for coal supply contracts, all coal leased will not be developed within 10 years of leasing. The coal glut will tend to keep prices low. This in turn may induce some producers to defer development in hopes of getting a more favorable return later. Policies such as the 10-year diligent production deadline and the section 3 disqualification act to curb any tendency to delay production under such conditions. OTA estimates that the 10-year production periods under section 3 and section 7 of FCLAA allow a lessee at most from 3 to 5 years to seek a customer for the coal to be produced from the lease before making a decision to commit significant effort and resources into developing a new mine in time to meet the diligence schedule. Some lessees have testified that they will not proceed with development without first securing a contract for the coal to be mined. This approach may now be out of step with the contracting practices of utilities. A producer might take a risk that a customer will be found later and proceed with mine plan design and permitting to within two to three years of the 10-year production deadline, but at that point, mine construction must begin in order to be producing even at the modest levels required for commercial quantities. There are western producers who have in fact begun mine development without contracts. For some the gambit has been successful, but others are now experiencing difficulty in finding enough contracts under existing market conditions to increase production to planned capacity levels. It is now fairly certain that most leases that are not permitted and under mine construction, or affiliated with a producing mine will not be able to satisfy the section 3 commercial quantities test by August 1986.

Figure 1



HOW HAVE COAL MARKET CONDITIONS AFFECTED PROSPECTS FOR SECTION 3 COMPLIANCE?

When FCLAA was enacted, substantial increases in western and Federal coal production were anticipated. This has in fact occurred with the Rocky Mountain and Northern Great Plains States increasing their share of total U.S. coal production from 12.1 percent in 1975 to 25.8 percent in 1984. Similarly, Federal coal production in these States increased from 4.8 to 11.6 percent of total U.S. production over the same period.

The very dramatic increases in demand for western Federal coal projected in some high range forecasts in the late 1970s and early 1980s have not materialized. Recent years have seen a scaling back of coal demand projections for the next decade. (See figure 1.) Three major factors have contributed to this:

1. The decline in the growth of electricity demand leading to cancellation and deferral of powerplants in western market areas;

2. High rail transportation costs for western coal which have effectively foreclosed some potential market areas; and

3. The failure of coal to make significant gains in the industrial markets or in synthetic fuels production.

Moreover, there is some evidence that utilities have modified their coal purchasing behavior to take advantage of the "buyers' market" for coal and are deferring commitments for coal contracts until shortly (2 to 3 years or less) before the plant is scheduled to come on line. Some powerplants with initial contracts signed in the mid-1970s have yet to be built and scheduled deliveries have been deferred under escape clauses. Rather than entering into a coal supply contract before building the plant, utilities can narrow their choices to one or more potential supply markets where there are ample amounts of coal are available and where there are few uncertainties that might contribute to cost increases. The utility can then delay the actual coal purchase contracts until shortly before the plant begins operation. The long lag time between signing a coal supply contract and actual deliveries to a newly built plant may no longer serve the economic interests of the buyer or seller.

For a coal lessee with uncommitted and undeveloped reserves today, there is little likelihood for any significant growth in coal demand to materialize in the next 5 to 10 years given the lead times for coal powerplant construction and the fact that very few new plants will be ordered during that period. Perhaps the major opportunity for a nonproducing lessee is to compete with existing mines in the spot market and for contract renewals and reofferings. Production from some existing mines could be displaced by new entrants with lower cost reserves. Without production, these lessees face loss of their leases, either voluntarily to avoid section 3 sanctions or eventually, involuntarily through enforcement of diligence requirements.

The chronic overcapacity and low demand growth have important implications for proposed section 3 relief and diligence legislation. If aggressive leasing policies to assure competition are continued, and there are many policy reasons that favor such "overleasing", a significant amount of reserves leased will not be brought into production even if the lessee makes substantial and "diligent" efforts at seeking a market and developing the lease. Among the implications of these trends are:

1. Lessees will lose leases through diligence enforcement or termination,or through relinquishment (assuming that leases are readjusted to include effective diligent production requirements and that these provisions are vigorously enforced).

2. Pressure for legislative relief from production requirements will continue. However, this pressure may subside or be counterbalanced with an increase in the number of lessees who either have satisfied diligence obligations or have new leases with stringent diligence requirements and thus have some interest in seeing that their competitors are subject to similar requirements.

3. Lessees will tend to lower lease bonus bids if they think they will not be able to mine or keep the lease. (Statutory fair market value requirements offset this tendency and should, if strongly implemented, prevent leasing of coal with little near term prospects of development.)

4. The reserves posture of producing lessees will be enhanced as only those lessees who can satisfy section 3 and diligence requirements will be able to assemble large reserves holdings by combining them with the producing leases in an LMU. Small amounts of production are enough to hold the lease. These lessees also will be tempted to bid low for new leases because of the anticipated lack of interest from disqualified lessees and other potential competitors if low growth market conditions continue.

5. There may well be a reduction in the total amount of Federal coal under lease as companies choose not to lease coal for inventory purposes. A reduced private inventory of Federal reserves in private hands makes the reliability and quality of periodic offerings of new Federal leases more important in assuring an adequate future supply of coal both to meet energy needs and to place competitive pressure on the prices charged by coal producers to coal consumers. It also makes it more critical that the coal leasing program be able to respond rapidly to any great increases in coal demand by offering tracts that are suitable for development and production within the time allotted for diligent development.

WHAT WILL BE THE LIKELY EFFECTS OF SECTION 3 ENFORCEMENT?

The effects of section 3 are already being felt in lease relinquishments and sales. More relinquishments and assignments can be expected as the section 3 deadlines near. Some lessees were prompted to reexamine their inventory of Federal leases and to decide which leases have near term development potential and are worth keeping. Leases that did not pass this internal screening were relinquished or offered for sale. As a result the overhang of total leased reserves has been reduced somewhat and the general quality of what remains has improved. A reduction in the amount of undeveloped reserves under lease may make it easier politically for the Department to justify more large scale lease offerings in the future.

Companies most affected by section 3 will be large oil companies and conglomerates who are involved both in coal and in Federal onshore oil and gas leasing. Not all major oil and gas producers hold nonproducing Federal coal leases, however, and there are many companies in the petroleum industry with no coal holdings at all. The major impact on noncomplying oil and gas company lessees will not be the ban on acquiring additional coal leases, but rather will be their exclusion from direct participation in the Federal onshore oil and gas leasing program. Disqualification from competitive oil and gas leasing and from the lottery may not have significant adverse impacts on the major oil and gas companies since many of them do not acquire their Federal leases directly through these methods. Oil and gas leases will continue to be available by assignments from other operators or from lease brokers through transactions as yet unrestricted by section 3. The greatest impact of section 3 on noncomplying major oil and gas lessees will be in their inability to obtain new, noncompetitive, over the counter leases for lands in frontier areas that have not previously been leased. (These "frontier areas" are lands that do not contain known producing geologic structures and where the oil and gas potential is unknown. The Overthrust Belt of Wyoming was such an area when many of the Federal oil and gas leases in that area were originally acquired noncompetitively.)[8]

Overall the impact of section 3 enforcement on the coal industry and the supply of coal to consumers will be slight. Producing mines are largely unaffected. In our 1981 study we found few active mines on Federal leases nearing exhaustion of mine life reserves that would require more coal to stay in operation. (We note that many operators do take advantage of emergency, production maintenance, and bypass leasing provisions to acquire additional reserves adjacent to their operations and mine them before moving to areas of existing leases with higher mining costs.) The potential effects of section 3 on competition in the coal industry are by no means clear cut. Section 3 enforcement could enhance competition by making more Federal coal available for acquisition by potential competitors if noncomplying leases are sold. The better quality tracts will probably be assigned, and the lessees may see some profit from the sale. The tracts might however be sold to other complying lessees and thus might not result in more competing firms. Another possibility is that some noncomplying oil and gas companies may, at least temporarily, get out of mining Federal coal by selling or spinning off their coal subsidiaries. This could in the long run increase the number of firms that could potentially mine and sell coal, since the oil and gas companies could later reenter the industry. On the other hand, it is also possible that some large energy firms will drop out of the Federal coal leasing program to avoid exposure to a potential section 3 disqualification and would thus reduce the number of competing firms in some areas.

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[8] OTA did not analyze what the impacts of section 3 might be if the Federal oil and gas leasing program were changed to a mostly competitive system. We think it probable that section 3 impacts might be slightly greater since it is expected that companies will be forced to compete directly for high potential tracts in frontier areas and elsewhere.

Among the 300 leases that were ranked as uncertain or unlikely to comply with section 3, there are several permitted mines with section 3 difficulties because they have been idled or are not yet producing sufficient quantities of coal. But most of the noncomplying leases are undeveloped tracts. Lessees will probably try to retain the noncomplying tracts with favorable near term development potential as long as possible. However, there are many noncomplying properties that have low near term development potential because there are no buyers for the coal to be produced; these are most likely to be relinquished or sold.

Among the potentially noncomplying properties are leases where development also poses environmental problems. Section 3 enforcement might cause these leases to be turned back. There are over 1.4 billion tons of undeveloped leased coal in Southwestern Utah, an arid area where there is no existing coal transportation network to serve large scale development and where any development activities are environmentally sensitive and controversial because of the proximity to Bryce Canyon, Canyonlands, Grand Canyon, Capitol Reef, Arches National Parks, Glen Canyon National Recreation Area and BLM roadless areas under review for possible wilderness designation. Several nonproducing leases in the San Juan basin of New Mexico are associated with pending preference right lease applications and are close to the Chaco Canyon National Monument and its outliers.

The nonproducing leases also include some 3 billion tons of reserves in the Powder River basin of Wyoming. About half of these reserves are only suitable for onsite use for power generation or synthetic fuels production because the coal is generally of poorer quality than coal elsewhere in the basin making these reserves noncompetitive in out of state markets. Finally there are some 53 nonproducing leases in scattered small undeveloped tracts with poor development potential. Many of these are held by individuals who are unlikely to be affected by section 3 disqualification.

By far the major reason why lease reserves held by major coal producing companies are not in production is lack of markets. There is simply more coal under lease than can be mined and sold in response to current and projected demand. In the West today, there is in excess of 100 million tons of excess annual production capacity in mines with Federal coal leases. The coal industry has historically displayed chronic overcapacity and it is likely that that situation will continue. The perceived seller's market for coal of the early to mid-1970s that prompted many long-term supply contracts appears now to have been an abnormal situation.

Section 3 impacts are being felt by lessees that were the primary targets of the provision: large energy companies and lessees with many leases which were acquired in the 1960s and 1970s and that are still undeveloped. Moreover, as a result of various mergers and acquisitions, the potential impacts of section 3 on oil and gas leasing are possibly more far reaching than anticipated in 1976. Since 1976 at least some of the public and legislative concerns over the involvement of these firms in the leasing program, which led to adoption of section 3, may have shifted. Much of the concern of the mid-1970s about the involvement of oil majors in the coal industry has subsided. Several major oil company lessees have aggressively developed and marketed their coal and are now among the West's largest producers. Some actually started producing in less than 10 years after acquiring the leases. The patterns of involvement of the major oil companies in the Federal coal leasing program are varied. Some hold only a few leases, all of which are producing, and have no inventory of undeveloped coal except that associated with operating mines. Other companies have some producing mines and a large inventory of undeveloped reserves. The latter companies (or their corporate predecessors) have historically preferred to acquire and hold a large inventory of reserves in excess of demand, including reserves in areas with no developed markets. One consequence of such a strategy is that it is often possible to acquire such reserves at a low initial cost and to wait for the market to develop and the price to increase. For this strategy to be successful, the firm must be able to hold the reserves until they become competitive, which could be decades after acquisition. This practice of "sitting on reserves and waiting for the market to develop" was seen as a form of speculation by coal producers which, while fairly common in private coal transactions, was criticized as inappropriate for Federal resources in the congressional debate over FCLAA. The perception that some corporate lessees were engaged in long term strategic or speculative holding of Federal reserves without any clear production plans was one reason for the imposition of section 3 and the 10-year diligent production period for Federal leases.

TABLE 6

OWNERSHIP OF FEDERAL COAL LEASES
BY INDUSTRY CATEGORY - 1975, 1980, AND 1984

BUSINESS CATEGORY	OWNERSHIP Acres	1975 %	OWNERSHIP Acres	1980 %	OWNERSHIP Acres	1984 %
Utilities	142,077	19%	163,259	21%	204,567	22%
Other Co's.	70,124	9%	84,367	10%	189,159	20%
Oil majors	138,409	18%	155,024	20%	141,157	15%
Nonres. Divers. Co's.	12,580	2%	35,675	5%	85,211	9%
Oil & Gas Co's.	42,193	5%	45,926	6%	70,365	8%
Steel Co's.	49,448	6%	60,015	8%	61,986	7%
Coal Co's.	92,825	12%	87,601	11%	55,247	6%
Metals & Mining Co's.	49,377	6%	17,620	2%	40,229	4%
Natural Gas Co's.	32,522	4%	36,317	5%	36,231	4%
Peabody Holding Co.	68,923	9%	62,009	8%	20,382	2%
Individuals	66,515	8%	43,215	4%	18,553	2%
TOTAL	764,993	100%	791,028	100%	923,087	100%

NOTE: Acreage includes all existing Federal coal leases, but excludes relinquishments.

SOURCE: Office of Technology Assessment

WHO CONTROLS FEDERAL COAL LEASES?

There are currently about 220 different individuals or firms that hold title to Federal coal leases. Many of the corporate lessees are actually owned or controlled by other companies. OTA first analyzed ownership of Federal coal leases in our 1981 technical memorandum, *Patterns and Trends in Federal Coal Lease Ownership 1950-80*. Table 6 provides updated information on Federal coal lease ownership for 11 different industry categories from 1975 to 1984. Table 7 shows the section 3 compliance status for the same industry categories.

While useful for historical and policy purposes, recent corporate mergers have made the original OTA industry category patterns slightly misleading for section 3 analyses. Conoco, an oil major, and its subsidiary Consolidation Coal Co. were acquired in 1981 by DuPont and were shifted to the nonresource-related diversified company category. If Conoco's holdings are added to those of other major oil companies, the oil majors become the largest leaseholding category and their noncomplying reserves is increased to 53 percent.

OTA has analyzed the reserve holdings and section 3 status of the 20 major Federal coal reserve holders. These 20 companies control a total of 264 Federal coal leases and over 65 percent of all Federal reserves under lease. They include major coal producers, major oil companies, utilities, a steel company, and metals and mining companies. Table 8 summarizes those reserves holdings and projected section 3 status of these companies.

TABLE 7

SECTION 3 COMPLIANCE STATUS
OF WESTERN PRE-FCLAA FEDERAL COAL LEASES
BY INDUSTRY CATEGORY

BUSINESS CATEGORY	ALL LEASES	LIKELY TO COMPLY			POTENTIALLY NONCOMPLYING		
	Acres	Leases	Acres	% Acres	Leases	Acres	% Acres
Other Co's.	148,336	32	56,730	38%	64	91,606	62%
Utilities	151,552	50	76,924	51%	48	74,628	49%
Nonres. Divers. Co's.	78,552	5	6,603	8%	41	71,919	92%
Oil majors	130,774	39	66,836	51%	51	63,938	49%
Steel Co's.	55,014	9	14,568	26%	31	40,446	74%
Metals & Mining Co's.	37,821	7	9,542	25%	28	28,279	75%
Coal Co's.	37,677	18	15,584	41%	23	22,093	59%
Oil & Gas Co's.	35,904	16	18,636	52%	13	17,268	48%
Peabody Holding Co.	20,257	6	7,907	39%	4	12,350	61%
Natural Gas Co's.	28,949	17	18,596	64%	7	10,353	36%
Individuals	6,513	3	200	3%	17	6,313	97%
TOTAL	731,319	189	292,126	40%	300	439,193	60%

NOTES

1. "% Acres" means the percent of total acreage held by an industry in each category.

2. Total acreage does not include post-FCLAA leases or leases located outside the seven major western States, or relinquished leases.

3. The number of leases includes all leases for which one or more of the lessees' parent companies fall into the designated industry category. The number of leases in each category reflects the total of all leases held by lessees in each category and exceed the total of pre-FCLAA leases because jointly held leases owned by companies in different categories appear in each category. The total number of leases has been adjusted to avoid double counting of these 40 leases. Acreages have been prorated to reflect the ownership percentages of joint lessees.

4. All ownership data is current as of Sept. 1, 1985.

SOURCE: Office of Technology Assessment

Table 8

THE TOP 20 FEDERAL RESERVE HOLDERS
SECTION 3 COMPLIANCE STATUS

	PARENT COMPANY OF LESSEES	TOTAL NUMBER OF LEASES	RECOVERABLE RESERVES UNDER LEASE (m.t.)	POTENTIALLY NONCOMPLYING		
				LEASES	RESERVES*	
1	Exxon Corp.	5	1,490	0	0	0%
2	Pacific Power & Light Co. [a]	31	1,453	10	427	27%
3.	Amax, Inc.	6	1,261	0	0	0%
4.	Atlantic Richfield Co.	13	1,242	3	51	4%
5.	DuPont[1]b	35	1,135	31	1,049	93%
6.	Peabody Holding Co. [c]	11	1,019	4	800	79%
7.	Broken Hill Prop. Ltd. [d]	30	930	25	624	67%
8.	Texaco, Inc. [e]	17	927	5	800	86%
9.	Chevron Corp. [f]	38	803	24	725	90%
10.	Kerr-McGee Corp. [g]	5	736	3	398	54%
11.	The Sun Co. [h]	8	643	6	97	15%
12.	Shell Oil Corp.	4	641	2	240	37%
13.	Peter Kiewit Sons, Inc. [i]	13	582	3	70	12%
14.	Kaneb Services, Inc. & Northwest Life Insurance	2	445	0	0	0%
15.	United States Steel Corp.	19	438	12	339	83%
16.	Mobil Corp. [j]	1	424	0	0	0%
17.	Swanton Corp.	16	361	16	361	100%
18.	Arizona Public Service San Diego Gas & Electric Southern Ca. Edison	21	345	21	345	100%
19.	Idaho Power Co. [k]	3	329	0	0	0%
20.	Montana Power Co.	9	287	1	0	0%
	TOTAL**	264	12,593	150	5,976	47%

NOTES

* All reserves in millions of tons.

** Totals have been adjusted to avoid double counting of jointly held reserves.

a. Includes joint ventures.

b. Includes 14 leases in which CONOCO, subsidiary Consolidation Coal Co., and Chevron's Gulf Oil subsidiary each own 50%. The leases total 23,890 acres with 241 million tons of reserves.

c. Totals exclude leases and reserves on which relinquishments and assignments have been approved or are currently pending.

d. Includes subsidiaries Utah International, Inc. and Energy Reserves Group, Inc.

e. Includes Texaco's Lake DeSmet holdings and leases held by Getty Minerals, but does not reflect recently announced sale of Getty's coal operations to Cyprus Mining or sale of Getty's 50% share of the Skyline Mine in Utah to Coastal States Energy Co.

f. Includes 14 leases in which Chevron's Gulf Oil subsidiary and Dupont's Consolidation Coal Company subsidiary each own 50%. The leases total 23,890 acres with 241 million tons of reserves.

g. Does not include adjustments for pending I-90 lease exchange of part of the East Gillette tract in Wyoming.

h. Does not include Sun's recently announced purchase of Soldier Canyon mine in Utah from California Portland Cement.

i. Includes joint ventures.

j. Total leases reflect two Mobil leases in the Rojo Caballo Mine now reconsolidated into a single lease.

k. Includes joint venture Bridger Coal Co. with Pacific Power & Light Co.

SOURCE: Office of Technology Assessment

Who Faces Section 3 Penalties and Why?

OTA found that leaseholders facing a section 3 penalty in 1986 include 15 of the top 20 Federal reserves holders. (See table 8.) The potentially noncomplying leases include those that are uncertain or or unlikely to comply with section 3. The 15 noncomplying lessees hold over three quarters of the potentially noncomplying reserves. There are several lessees who hold substantially greater share of nonproducing leases than others and who would be particularly affected by section 3 or any modifications to it. These companies are: Consolidation Coal Co. (a subsidiary of Conoco, which is owned by E.I. du Pont de Nemours & Co. (DuPont); Chevron Corp. (which in 1984 acquired Gulf Oil Corp which had previously acquired Kemmerer Coal Co. a major Federal coal leaseholder); and Utah International, Inc., (acquired by the Australian company Broken Hill Proprietary Ltd. from General Electric Corp.) There are other firms with a significant portion of their lease reserves at risk of noncompliance, but pending assignments and relinquishments could resolve most of their problems. Still other major reserves holders will be unaffected by potential disqualification because they have no immediate need for additional coal reserves and have no involvement in other Federal mineral leasing.

Among all lessees, table 7 shows that individuals, nonresources-related diversified companies, steel companies, metals and mining companies, Peabody Holding Co., coal companies, and "other" companies all have over 50 percent of their leased acreage at risk of noncompliance.

WHAT IS THE REVENUE GAIN OR LOSS TO THE FEDERAL GOVERNMENT FROM SECTION 3 ENFORCEMENT OR REPEAL?

OTA believes that it is not practicable to calculate the value of the specific gain or loss from enforcement or repeal because of the countervailing effects of such actions and the extensive assumptions of fact that would have to be made. However we can discuss the issue in a more general manner. If section 3 is enforced, leases will be relinquished, the government will lose annual rental payments, and possibly royalties from leases that might have been mined. If the relinquished leases were resold later and brought into production, there might be an intervening revenue loss. On the other hand, any loss of revenues from relinquishments would be offset by bonus payments on resale of the new leases and higher post-FCLAA royalties on production. (Bonus revenues, even if only at the current regulatory minimum bid level of $100 per acre would be significantly higher than the $1 to $3 per acre annual rental paid on nonproducing leases.) OTA does not believe that all of the leases that might eventually be relinquished will be reoffered for lease in the next 10 to 15 years, particularly those outside of currently producing coal fields and those with poor quality reserves. It is unlikely that there would be much interest in them if payment of a fair market value bonus were required. We also doubt that all of the noncomplying section 3 leases will be relinquished. Lessees probably can find buyers for the better quality tracts and, in some cases, the transfer would create little delay in the tract's overall development schedule. In such cases, there might be little direct loss to the Federal Government because rentals would continue and royalties would be paid on production. It can be argued that if the lease were assigned rather than relinquished, that the coal might be mined at the lower pre-FCLAA royalty rates. OTA believes that, given the 3 to 7 years needed to bring an unpermitted lease into production, it is likely that any period during which lower royalties would be paid would be short. (There is one notable exception to this finding of minimal potential revenue loss. An undetermined number of pre-FCLAA leases were not readjusted properly or on time, and some readjustments were reversed on appeal. If these decisions are left unchallenged, these leases might carry pre-FCLAA royalty rates of 15 to 20 cents per ton for 10 to 20 more years. Some of these leases may have section 3 compliance problems. Repeal or modification might remove one option left to the Department to correct at least some of the failed readjustments by inducing the lessees to amend their leases to include the FCLAA requirements to comply with section 3. This potential loss in royalty revenues from these leases is not, however, due directly to section 3.)

Repeal or modification of section 3 without requiring a significant payment obligation on nonproducing leases as the price of relief would represent a lost opportunity for generating additional revenues to the government from pre-FCLAA leases by reselling relinquished leases or by allowing payment of holding fees as a means of compliance. Does repeal create a windfall for the lessee? There is no direct financial transfer to the lessee. To find such a windfall, one must assume that repeal makes the leases more valuable, but this increase would be hard to measure. One might assume that the effect of repeal would create a gain for the lessee of the amount that the original lease value may have been discounted to reflect the risk that it would lost for nondevelopment after 10 years. The gains would be realized in a higher resale value of the lease, or in some increased profit in developing the lease later. Such a theory, if valid in practice, would be more directly applicable to the Department's 1982 relaxation of the 1986 diligence deadline for pre-FCLAA leases than to section 3. Any discount for the risk of nondevelopment for section 3 purposes is likely to be small as section 3 does not deprive a lessee of the lease as a penalty. Moreover, the lessee can be purged of the section 3 disqualification by selling the lease, perhaps even at a profit. A lessee would probably relinquish the lease only as a last resort.

We think that it is unlikely that lessees in fact have discounted the value of their leases for the potential impacts of either section 3 or 7 (or the 1976 diligence regulations). For the largest group of noncomplying lessees, those lessees facing a section 3 disqualification in 1986, such discounting is particularly unlikely since they would have to have foreseen events occurring after they acquired the leases in order to reduce the amount they paid for them originally. We also think it unlikely that such lessees would have foreseen the full extent of applicability of section 3. For leases sold or transferred after passage of FCLAA, there does not appear to be any discernible pattern of discounting for future nonproduction penalties. The reasons for this may be that:

1. The lessees fully expected to be able to mine or resell the reserves within the time allotted; or
2. The reserves were already underpriced when they bought them; and/or
3. The lessees did not expect that either Congress or the Department would actually enforce section 3 or any diligence provisions applicable to the leases.

Alternative Legislative Options for Section 3

OTA examined a range of possible legislative options for amending section 3. The options, their advantages and disadvantages are discussed in this paper and summarized here. OTA found the contributions of the participants at its May 1985 section 3 workshop were extremely useful in developing and assessing these options.

In evaluating various proposals for amending the Federal coal leasing laws, it is helpful to keep two facts in mind.

First, how long and under what conditions a lessee should be allowed to hold a Federal coal lease without production is fundamentally a political decision. The decision will largely depend on one's views of the relative importance of sometimes conflicting policy goals underlying the Federal coal leasing program and on how vigorously the diligent development requirements should be enforced for a resource that is abundant and an industry that historically suffers chronic overcapacity.

Second, in the "normal" competitive structure of western coal operations there is a significant excess of production capacity over current production. There is simply more coal under lease than can reasonably be mined and sold or committed under long-term contract in the next 5 to 15 years. This situation is not likely to change, because leasing policies over several administrations have tended for various reasons to favor leasing of Federal coal reserves well in excess of amounts needed to meet projected demand. As a result there will be many Federal leaseholders that will not be able to mine their leases despite even their most "diligent" efforts at marketing and development.

OTA considered several factors in evaluating the options. Among these considerations were: the extent the option provides relief from section 3 disqualification for noncomplying lessees; whether the option advances the various policies inherent in section 3 of encouraging production, deterring speculation, and discouraging the extensive holding of nonproducing coal leases by large energy conglomerates; and how easily and predictably the option can be implemented and administered. The major legislative options for amending section 3 include the following:

Option 1: Keep section 3 unchanged.

Option 2: Repeal section 3.

Option 3: Limit section 3 to new coal leases only.

Option 4: Extend the time to comply with section 3.

Option 5: Modify section 3 to allow achievement of lease development milestones as alternatives to producing in commercial quantities requirement.

Option 6: Remove the 10-year holding period for section 3 and make the disqualification applicable to anyone holding a nonproducing lease that is more than 10 years old.

Option 7: Allow qualifying payments to be made annually in lieu of production to maintain eligibility for new leases.

Option 8: Impose a surcharge on all new leases acquired by a noncomplying lessee.

Option 9: Require turnback of an equivalent amount of noncomplying lease reserves or acreage to qualify for each new lease.

Option 10: Allow relinquishment of all noncomplying old leases in exchange for section 3 relief and a preferential option to purchase new leases for the same lands if they are reoffered after being subject to land use planning, environmental screening, and surface owner consent ("Lease Rollover" Option).

The results of OTA's analysis of these options are summarized in table 9.

Several of the options are similar to proposed legislation, however OTA's discussion of the options does not deal with the specifics of individual bills, but rather contrasts different generic approaches. OTA's analysis disclosed several options that are more or less likely to promote the various goals of section 3 legislation, depending on which goal is given priority. Several options would provide relief to nonproducing lessees in complying with the producing in commercial quantities requirement, while at the same time maintaining the policy that leases are to be held for development and production, but the balance between these goals is struck differently.

Option 1 - keeping and enforcing section 3 unchanged is most consistent with the purposes for which it was enacted, particularly since the Department of the Interior has substantially relaxed, or even nullified, most production requirements for pre-FCLAA leases. The Department has ample discretion to resolve the compliance difficulties for any lessees that are producing or have produced coal from their leases or that have experienced unusual delays in mine development. Keeping section 3 would maintain fairness for lessees who have already relinquished or sold leases in order to comply.

Option 7, the adoption of annual holding fees for noncomplying leases, maintains the underlying policies of section 3 but gives the greatest degree of flexibility to lessees and the Department in avoiding the section 3 disqualification. Option 7 would allow a lessee to make qualifying annual payments on all noncomplying leases in order to retain eligibility for new leases. An economic penalty would be imposed for nonproduction, but lessees would be allowed to keep old leases and acquire new ones at a cost. (This economic penalty could be reinforced by requiring similar nonproduction payments from all old leases on the next lease readjustment.) There are several formulas on which such holding fees could be based, acreage, reserves, minimum production, or ad valorem. OTA finds that a relatively simple payment structure should be used since many lessees can be expected to use this option. Moreover the holding fee should be substantial enough to force some leases to be relinquished and to lessen the assignment value of others, thus discouraging speculation. An annual payment of one cent per ton of recoverable reserves, for example, would be easy to administer and offers predictability and flexibility for lessees. OTA found that payments at that level would measurably affect the economics of holding leases in virtually all regions and thus would provide at least some economic pressure to develop or get rid of a lease. The holding fee option has an additional benefit that section 3 currently does not -- the qualifying payments would provide some pre-production revenues to the Federal and State governments.

Option 1 and **Option 10** appear likely to return a significant number of nonproducing leases to the government. It is likely some leased lands where development is environmentally unsuitable or controversial will thus be removed from the threats imposed by mining. Other valuable coal tracts may be reoffered for lease at fair market value. Option 10, the lease rollover option, would give the relinquishing leaseholder priority in purchasing a new lease on the same lands at fair market value and would allow the lessee to retain at least some of the benefit of any initial development work on the lease.

Repeal of section 3 (**Option 2**) or limiting the disqualification to coal leases only (**Option 3**) would provide the greatest relief from the effects of section 3 enforcement. These options would allow lessees to maintain their inventory of leased reserves for development or sale. These options also remove or lessen the only statutory incentive for the major nonproducing lessees to either begin mining coal from their leases or get rid of them before the mid-1990s when current diligence regulations might be enforced. Given the uncertainty over what diligence requirements are applicable to pre-FCLAA leases and when, if ever, they must be enforced, these options may effectively remove the only restraint on continued holding of these leases without production. These two options therefore appear to be inconsistent with the intent of section 3 were either to be adopted without substantial counterbalancing changes in section 7 diligence requirements for pre-FCLAA leases. (One possible example would be the automatic imposition of substantial holding fees for nonproducing leases on the date they become subject to readjustment and a clear statutory provision terminating pre-FCLAA leases that do not begin producing within ten years.)

The lease turnback, **Option 9** is administratively workable only if section 3 is limited to coal leases. Turnback offers the greatest benefit (next to repeal of section 3) to lessees with large amounts of nonproducing acreage or reserves. These lessees would be able to hold onto nonproducing reserves until new coal lease is sought, and then would only be required to turn back that amount of acres or reserves necessary to qualify for the new lease, while keeping the rest of the nonproducing leases.

Option 8 would impose a surcharge on new coal leases sought by a noncomplying leaseholder and would be an attractive option for some major noncomplying lessees, particularly if only a small amount of additional acreage or reserves is needed.

Lessees who are or are almost producing, but for some reason cannot satisfy the section 3 producing in commercial quantities test as structured by the Department would be aided most by three options: **Option 4**, an extension of the section 3 deadline; **Option 7**, qualifying payments in lieu of production; and **Option 5**, achievement of alternative mine development milestones to comply with section 3.

Option 6 would magnify the impact of section 3 by making it apply to all nonproducing leases. This would go beyond the original scope of section 3 and reverse in part the Department's relaxation of diligent production rules. Option 6 would create even more pressure for legislative relief, unless it were combined with additional exceptions, such as the holding fee, turnback, rollover, or alternative development milestones approaches.

TABLE 9

OPTIONS FOR PROMOTING TIMELY PRODUCTION FROM FEDERAL COAL LEASES
COMPARISON OF SECTION 3 OPTIONS AND POLICY OBJECTIVES

POLICY GOAL OR EFFECT	OPTION 1	OPTION 2	OPTION 3	OPTION 4	OPTION 5	OPTION 6	OPTION 7	OPTION 8	OPTION 9	OPTION 10
Requires legislation	YES	YES	YES	YES	MAYBE	YES	YES	MAYBE	MAYBE	YES
Encourage production	YES	NO	NO	YES	YES	YES	YES	MAYBE	MAYBE	MAYBE
Encourage turnback	YES	NO	NO	MAYBE	YES	YES	YES	MAYBE	MAYBE	MAYBE
Deter speculation	YES	NO	NO	YES	YES	YES	YES	MAYBE	MAYBE	MAYBE
Generate revenue	NO	NO	NO	NO	NO	NO	YES	YES	NO	YES
Promote diligence policy	YES	NO	NO	YES	YES	YES	YES	YES	NO	YES
Ease of administration										
increases burden	YES	NO	NO	YES	YES	YES	YES	YES	YES	YES
decreases burden	NO	YES	YES	NO	NO	NO	NO	NO	NO	NO
Provide flexibility										
to Department	NO	N/A	NO	YES	YES	NO	YES	NO	NO	YES
to Lessees	NO	N/A	NO	YES	YES	NO	YES	YES	YES	YES
Give additional time										
to all lessees	NO	N/A	NO	MAYBE	NO	NO	YES	YES	NO	NO
to leases under development	NO	N/A	NO	YES	YES	NO	YES	YES	NO	NO
Provide relief from penalty										
to all lessees	NO	YES	NO	NO	NO	NO	YES	YES	NO	YES
to oil and gas lessees	NO	YES	YES	NO	NO	NO	YES	YES	YES	YES
to producing lessees needing time to meet CQ	NO	YES	NO	YES	YES	NO	YES	YES	NO	NO
to lessees with many noncomplying leases	NO	YES	NO	NO	NO	NO	YES	MAYBE	YES	MAYBE
Make lease retention an economic decision	NO	YES	NO	NO	MAYBE	YES	YES	NO	MAYBE	MAYBE
Reduce lease inventory	YES	NO	NO	MAYBE	MAYBE	NO	MAYBE	MAYBE	NO	YES
Maintain lease inventory	NO	YES	YES	MAYBE	MAYBE	YES	MAYBE	MAYBE	YES	NO
Improve quality of lease inventory	YES	NO	NO	MAYBE	MAYBE	YES	MAYBE	MAYBE	YES	YES
Maintain fairness for complying lessees	YES	NO	NO	YES	YES	YES	YES	YES	NO	MAYBE
Create incentive for holding leases for resale or exchange	NO	YES	YES	MAYBE	NO	NO	NO	NO	YES	NO
Eliminate potential bidders	YES	NO	YES	YES	YES	YES	NO	NO	MAYBE	MAYBE

NOTES:

YES	=	Option has effect or advances policy goal.
NO	=	Option does not have effect or hinders policy goal.
MAYBE	=	Overal impact of option not certain and/or depends on response of lessee.
N/A	=	Not applicable.

SOURCE: Office of Technology Assessment

CHAPTER 3

FEDERAL COAL LEASES 1985: AN ANALYSIS OF CURRENT DEVELOPMENT STATUS, OWNERSHIP TRENDS, AND POTENTIAL SECTION 3 COMPLIANCE

For this report, OTA reviewed some 648 Federal coal leases including over 100 leases issued since 1976 and more than 30 leases that were relinquished, exchanged, or consolidated since 1981. A nonproducing coal lease will create a section 3 disqualification for the lessee if the lease has been held for 10 or more years, is not producing coal in commercial quantities, and is not covered by one or more of the limited exceptions to section 3. To determine the extent of the possible impacts of section 3, OTA reviewed the development and production status of all Federal coal leases. OTA also reviewed the lease ownership histories for the leases to determine when the section 3 10-year holding period would expire for the current lessees. Information on lease ownership is discussed later in this section. OTA projected the section 3 compliance status for Federal coal lessees using the lease ownership and development status information in the OTA data base and estimates of future coal demand in western coal production regions.

Development and Production Status of Federal Coal Leases

The development status of Federal coal leases reflects their current mine plan status.[1] Leases with an approved mine plan are leases within or associated with a mine plan approved by the Department of the Interior (DOI) and include leases within the active permit area and leases designated in the unpermitted life of mine area. Leases with a pending mine plan are those leases covered by mine plans under active permit review by the Office of Surface Mining (OSM). Undeveloped leases are all leases that do not have an approved or pending mine plan.

Table 10 summarizes the development status of the 648 Federal coal leases in OTA's data base. They include 616 leases in the seven Western States, of Colorado, Montana, New Mexico, North Dakota, Oklahoma, Utah, and Wyoming. OTA focused on the Federal leases in these western States with 95 percent of the leases and over 99 percent of the leased reserves. The 32 remaining leases are in the States of Alaska (2), Alabama (15), California (1), Kentucky (5), Oregon (3), Pennsylvania (2), Virginia (1), and Washington (2).

In 1985, 333 leases, over half of the western leases, with 13.1 billion tons of recoverable reserves, almost 65 percent of the reserves under lease, were covered by an approved or pending mine plan. Over 250 leases remain undeveloped, however, and 32 leases have been relinquished, exchanged or consolidated since 1981.

OTA found that of the 616 western leases, 299 leases or 48.5 percent of all the leases in the 7 western States were being actively mined or are associated with an permitted mine. About 60 percent of the reserves under lease are covered by an approved mine plan. This category includes active mines, temporarily inactive permitted mines, newly permitted mines now under construction, and some leases that are outside of the permit area, but are scheduled for mining

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[1] OTA's development status classifications are based on our earlier work in U.S. Congress, Office of Technology Assessment, An Assessment of Development and Production Potential of Federal Coal Leases, (Washington, DC: U.S. Government Printing Office, December 1981) OTA-M-150.

TABLE 10

DEVELOPMENT STATUS OF FEDERAL COAL LEASES
(ALL LEASES, ALL STATES IN OTA DATABASE)
AUGUST 1985

STATE	DEVELOPMENT STATUS	NO. LEASES	%	ACRES	%	RECOVERABLE RESERVES	%
Colorado							
	Approved	81	55.1%	88,155	52.6%	1,153	43.6%
	Pending	6	4.1%	20,891	12.5%	136	5.1%
	Undeveloped	54	36.7%	55,246	33.0%	1,295	48.9%
	Relinquished	6	4.1%	3,355	2.0%	62	2.4%
	Subtotal	147		167,647		2,646	100%
Montana							
	Approved	19	70.4%	35,548	79.6%	974	59.9%
	Pending	2	7.4%	1,198	2.7%	150	9.2%
	Undeveloped	6	22.2%	7,893	17.7%	503	30.9%
	Relinquished	0	0.0%	0	0.0%	0	0.0%
	Subtotal	27		44,639		1,627	100%
New Mexico							
	Approved	17	54.8%	33,275	72.6%	314	66.9%
	Pending	1	3.2%	2,044	4.5%	60	12.8%
	Undeveloped	12	38.7%	9,287	20.3%	75	15.9%
	Relinquished	1	3.2%	1,240	2.7%	21	4.5%
	Subtotal	31		45,846		470	100%
North Dakota							
	Approved	16	76.2%	15,198	79.2%	220	82.7%
	Pending	0	0.0%	0	0.0%	0	0.0%
	Undeveloped	4	19.0%	3,914	20.4%	46	17.2%
	Relinquished	1	4.8%	80	0.4%	0	0.0%
	Subtotal	21		19,192		266	100%
Utah							
	Approved	77	35.2%	95,548	30.1%	1,210	34.6%
	Pending	20	9.1%	23,885	7.5%	300	8.6%
	Undeveloped	108	49.3%	174,841	55.1%	1,645	47.1%
	Relinquished	14	6.4%	22,844	7.2%	341	9.8%
	Subtotal	219		317,118		3,496	100%
Wyoming							
	Approved	82	68.3%	166,884	64.2%	8,323	74.4%
	Pending	3	2.5%	3,580	1.4%	268	2.4%
	Undeveloped	26	21.7%	78,242	30.1%	2,387	21.3%
	Relinquished	9	7.5%	11,438	4.4%	216	1.9%
	Subtotal	120		260,144		11,194	100%
Oklahoma							
	Approved	6	11.8%	8,666	10.6%	6	2.9%
	Pending	3	5.9%	4,900	6.0%	15	7.4%
	Undeveloped	40	78.4%	66,851	82.0%	179	89.5%
	Relinquished	2	3.9%	1,120	1.4%	0	0.0%
	Subtotal	51		81,537		201	100%
Total West							
	Approved	298	48.4%	443,274	47.4%	12,200	61.3%
	Pending	35	5.7%	56,498	6.0%	928	4.7%
	Undeveloped	250	40.6%	396,274	42.3%	6,130	30.8%
	Relinquished	33	5.4%	40,077	4.3%	641	3.2%
	Subtotal	616		936,123		19,899	100%
Other States							
East	not determined	24		17,868		64	
Other West	not determined	8		9,173		39	
	Subtotal	32		27,041		103	
Total All Leases		648		963,164		20,003	

NOTE: All reserves in millions of tons.

SOURCE: Office of Technology Assessment

later. Table 11 summarizes the production status of existing Federal coal leases in western States.

A mine is "producing" if coal was mined in 1983, 1984 or 1985 and the mine has not been shut down. Table 11 shows the current production status of western leases and also the number of leases within and outside the mine permit mine areas.

The approved mine plan category includes leases generally considered as "producing", however, not all the 299 leases in this category have actually been mined. OTA found 226 leases in active mines, but actual production was reported on only 118 leases in 1984. There are a number of reasons why some "producing" leases may not have reported production in any given year. The sequence of mining operations in multi-lease tracts can mean that a Federal lease might be mined only every few years over the mine life or perhaps only once during the 40 years that a mine is in operation. Some leases in active mines may have already been depleted; eight leases were in this category in 1985. These leases aren't producing, because presumably there aren't any recoverable reserves left. The depleted leases can not be relinquished because reclamation is incomplete and, in some cases, the lessee may need to maintain control over the lands for reclamation or mine access.

OTA identified 39 leases in inactive permitted mines which were shut down because of poor markets, or accidents, or other reasons. The approved mine plan category includes 6 leases in permitted mines that have not begun producing to meet scheduled contract commitments and

Table 11

PRODUCTION STATUS OF FEDERAL COAL LEASES
IN SEVEN WESTERN STATES

		Total			In Permit		Outside Permit	
Development Status	Production Status	No. Leases	Acres	Reserves	No. Leases	Acres	No. Leases	Acres
Approved Permit	Producing	226	333,277	9,676	190	288,094	36	45,183
	Mined Out	8	12,908	12	8	12,908	0	0
	Inactive	39	50,644	515	34	42,745	5	7,899
	Contracts	6	14,679	1,226	6	14,679	0	0
	No Contracts	19	31,766	806	19	31,766	0	0
	Subtotal	298	443,274	12,236	257	390,192	41	53,082
Pending Permit	Contracts	4	6,944	75	4	6,944	0	0
	No Contracts	31	49,544	835	26	33,108	5	16,446
	Subtotal	35	56,498	928	30	40,052	5	16,446
Undeveloped	No Production	206	366,785	5,863				
	Past Prod.	44	29,489	267				
	Subtotal	250	396,274	6,130				
TOTAL		583	896,046	19,294				

All reserves in millions of tons.

NOTE: Totals exclude leases that have been relinquished and 32 leases outside of the seven Western States. Individual column entries may not add to totals because of independent rounding.

SOURCE: Office of Technology Assessment

another 19 leases in permitted mines that have no contracts. There are 41 leases outside the active permit areas which have been designated by the operator to be mined over the life of the mine.

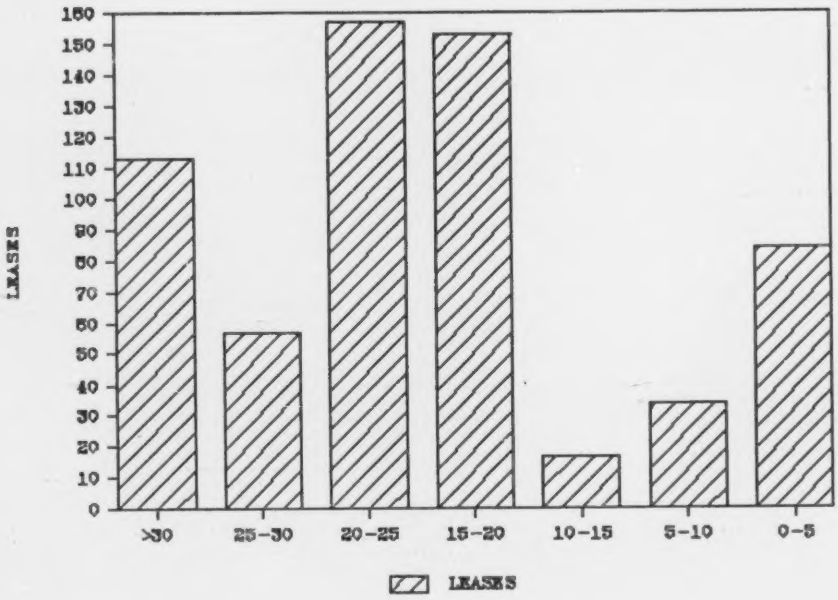
There were 35 leases with mine plans covering some 928 million tons of reserves under review in 1984-85. The pending mine plan category includes some leases that, because of poor market conditions, may not be mined in the near future even if the mine is permitted.

There are 250 leases still undeveloped. They contain about 6.1 billion tons of recoverable reserves or roughly 30 percent of all Federal leased reserves. They include some leases with inactive mine plans and others where some initial development work, such as environmental baseline studies, may have been completed or be ongoing. At least 44 undeveloped leases were mined in the past, but mining and reclamation activities have now been abandoned. The remaining 179 undeveloped leases appear to have had no production at all.

OTA found 33 leases that have been or are being relinquished. Many of these leases, particularly those with unfavorable short term development potential, are being turned back to avoid section 3 problems for the lessees or their parent companies and affiliates. Among companies that have indicated that they have or are planning to relinquish leases are: Gulf Oil Corp., Shell Oil, Atlantic Richfield Co., Montana Power Co., and Peabody Holding Co.

Figure 2.

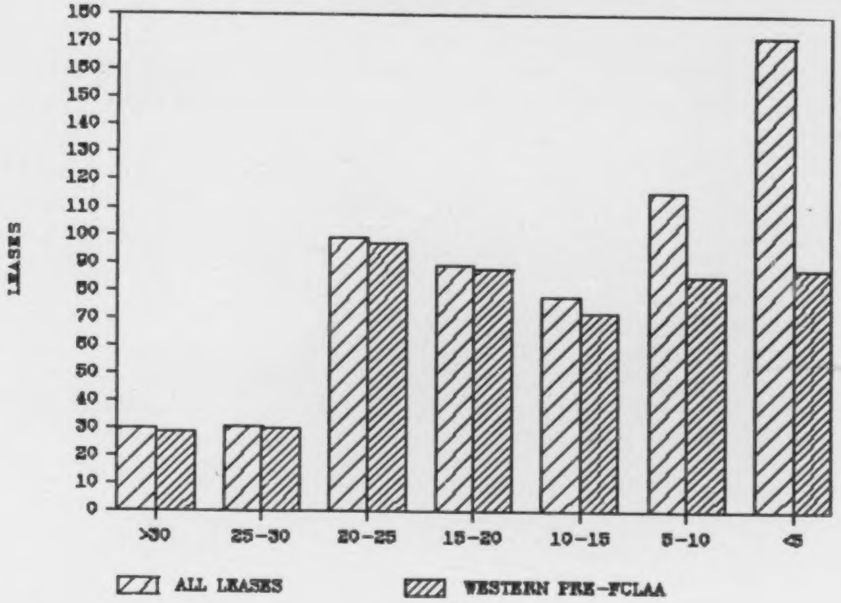
Age of Federal Coal Leases



Source: Office of Technology Assesment

Figure 3.

How Long Have Leases Been Held?



Source: Office of Technology Assessment

SECTION 3 COMPLIANCE STATUS OF FEDERAL COAL LEASES

As a precondition for a section 3 disqualification, a lessee or a related entity must have held the nonproducing lease for at least 10 years after August 4, 1976. Figure 2 shows the age of all existing leases. Fifty-three percent of existing leases are over 20 years old; 65 percent of pre-FCLAA leases are more than 20 years old. Figure 3 shows how long existing leases have been held by the current owners. (If a lease is held by more than one party, only the longest period of ownership was used.) About 39 percent of existing leases have been held for more than 20 years; almost half of the pre-FCLAA leases have been held for more than 20 years. Sixty-five percent of the pre-FCLAA leases have been held by their current owners for more than 15 years.

Section 3's primary impacts will be on the leases that were issued before enactment of FCLAA in 1976 (pre-FCLAA or "old" leases). OTA has generally excluded the new post-FCLAA leases from its section 3 analysis, but we did include new leases issued under pre-FCLAA terms and conditions as a result of lease exchanges. Table 12 shows the current development status of the 489 pre-FCLAA leases still in effect in the seven western States. Lessees have relinquished or exchanged 32 other pre-FCLAA leases since 1981. Slightly less than half of the western pre-FCLAA leases, 235 leases, have approved mine plans and 31 pre-FCLAA leases are in pending mine plans. There are 223 western pre-FCLAA leases with over 4.8 billion tons of coal reserves that are currently undeveloped.

Table 12
DEVELOPMENT STATUS OF PRE-FCLAA LEASES
IN 7 WESTERN STATES
AUGUST 1985

STATE	DEVELOPMENT STATUS	NO. LEASES	%	ACRES	%	RECOVERABLE RESERVES	% .
Colorado							
	Approved	60	55.0%	72,934	60.2%	921	48.5%
	Pending	3	2.8%	6,162	5.1%	12	0.6%
	Undeveloped	46	42.2%	41,973	34.7%	967	50.9%
	Subtotal	109	100%	121,069	100%	1,900	100%
Montana							
	Approved	11	61.1%	29,303	80.7%	805	62.9%
	Pending	2	11.1%	1,198	3.3%	150	11.7%
	Undeveloped	5	27.8%	5,797	16.0%	325	25.4%
	Subtotal	18	100%	36,298	100%	1,280	100%
New Mexico							
	Approved	15	55.6%	28,491	71.8%	218	61.9%
	Pending	1	3.7%	2,044	5.2%	60	17.0%
	Undeveloped	11	40.7%	9,127	23.0%	74	21.0%
	Subtotal	27	100%	39,662	100%	352	100%
North Dakota							
	Approved	11	73.3%	12,449	76.1%	187	80.3%
	Pending	0	0.0%	0	0.0%	0	0.0%
	Undeveloped	4	26.7%	3,914	23.9%	46	19.7%
	Subtotal	15	100%	16,363	100%	233	100%
Utah							
	Approved	65	35.3%	78,916	32.7%	1,123	39.0%
	Pending	19	10.3%	23,245	9.6%	300	10.4%
	Undeveloped	100	54.3%	139,213	57.7%	1,460	50.6%
	Subtotal	184	100%	241,374	100%	2,882	100%
Wyoming							
	Approved	68	73.1%	141,437	69.5%	7,334	78.3%
	Pending	3	3.2%	3,580	1.8%	268	2.9%
	Undeveloped	22	23.7%	58,514	28.7%	1,768	18.9%
	Subtotal	93	100%	203,531	100%	9,371	100%
Oklahoma							
	Approved	5	11.6%	8,526	11.7%	6	3.2%
	Pending	3	7.0%	4,900	6.7%	15	8.0%
	Undeveloped	35	81.4%	59,596	81.6%	163	88.8%
	Subtotal	43	100%	73,022	100%	184	100%
All West							
	Approved	235	48.1%	372,056	50.9%	10,594	65.4%
	Pending	31	6.3%	41,129	5.6%	804	5.0%
	Undeveloped	223	45.6%	318,134	43.5%	4,803	29.6%
	TOTAL	489	100%	731,319	100%	16,201	100%

NOTE: All reserves in millions of tons

SOURCE: Office of Technology Assessment

OTA's review of the development status of the 12 pre-FCLAA leases in other States was limited. We determined, however, that at least five of the leases are part of mines that were producing in 1984 and five more leases are undeveloped. At least three undeveloped leases have abandoned mine workings. The current development status of two leases was undetermined.

OTA estimated the section 3 production deadlines for all pre-FCLAA coal leases using information on coal lease assignments and corporate ownership. Table 13 shows these results. (Note: The effective date for section 3 disqualifications was extended to December 31, 1986, by the Continuing Appropriations Resolution for Fiscal Year 1986; Public Law, 99-190. This delay does not affect the results of OTA's analysis of section 3 compliance).

OTA found that 331 western pre-FCLAA leases, 67 percent of these leases, will have been held by the current lessee for 10 or more years on August 4, 1986 and thus must be producing in commercial quantities to enable the lessee and all related entities to acquire onshore mineral leases. Over 70 percent of these 331 leases have been held for over 15 years. Because of assignments and other lease transfers, 158 leases will not be subject to potential section 3 disqualification until after August 4, 1986. OTA assumed that most lease assignments made as part of a corporate acquisition and merger would not restart the 10-year section 3 clock for purposes of this analysis.

TABLE 13
SECTION 3 DATES FOR PRE-FCLAA FEDERAL COAL LEASES
IN THE SEVEN WESTERN STATES

SECTION 3 DATE*	SECTION 3 COMPLIANCE	NO. OF LEASES	ACRES	RESERVES**
Aug. 4, 1986	In Compliance	134	228,477	7,491
	Uncertain	27	42,307	942
	Noncompliance	170	247,404	5,035
	Subtotal	331	518,188	13,468
Aug. 5, 1986 to Aug. 4, 1991	In Compliance	23	21,715	293
	Uncertain	10	18,457	344
	Noncompliance	39	57,904	536
	Subtotal	72	98,076	1,173
After Aug. 4, 1991	In Compliance	32	41,934	522
	Uncertain	19	34,390	355
	Noncompliance	35	38,731	683
	Subtotal	86	115,055	1,561
	TOTAL	489	731,319	16,201
	In Compliance	189	292,126	8,306
	Uncertain	56	95,154	1,641
	Noncompliance	244	344,039	6,254

NOTES:
All reserves in millions of tons
* Section 3 date is earliest section 3 date for lease, if there is more than one lessee.
** Total recoverable reserves include pre-FCLAA reserves only; total reserves may include some associated reserves with later section 3 dates because reserves data were sometimes not available on a lease by lease basis.

SOURCE: Office of Technology Assessment

TABLE 14

SECTION 3 COMPLIANCE STATUS OF PRE-FCLAA LEASES IN 7 WESTERN COAL STATES

STATE	COMPLIANCE	LEASES	%	ACRES	%	RESERVES	%
COLORADO							
	Likely	51	46.8%	53,082	43.8%	745	39.2%
	Uncertain	11	10.1%	22,094	18.2%	150	7.9%
	Unlikely	47	43.1%	45,893	37.9%	1,005	52.9%
	Total	109	100%	121,069	100%	1,900	100%
MONTANA							
	Likely	11	61.1%	29,303	80.7%	805	62.9%
	Uncertain		0.0%		0.0%		0.0%
	Unlikely	7	38.9%	6,995	19.3%	475	37.1%
	Total	18	100%	36,298	100%	1,280	100%
NEW MEXICO							
	Likely	11	40.7%	21,229	53.5%	222	63.1%
	Uncertain		0.0%		0.0%		0.0%
	Unlikely	16	59.3%	18,433	46.5%	130	36.9%
	Total	27	100%	39,662	100%	352	100%
NORTH DAKOTA							
	Likely	7	46.7%	8,931	54.6%	127	54.2%
	Uncertain	4	26.7%	3,518	21.5%	61	26.1%
	Unlikely	4	26.7%	3,914	23.9%	46	19.7%
	Total	15	100%	16,363	100%	233	100%
UTAH							
	Likely	49	26.6%	51,622	21.4%	864	30.0%
	Uncertain	17	9.2%	29,865	12.4%	326	11.3%
	Unlikely	118	64.1%	159,887	66.2%	1,692	58.7%
	Total	184	100%	241,374	100%	2,882	100%
WYOMING							
	Likely	52	55.9%	114,533	56.3%	5,523	58.9%
	Uncertain	14	15.1%	19,042	9.4%	1,046	11.2%
	Unlikely	27	29.0%	69,956	34.4%	2,802	29.9%
	Total	93	100%	203,531	100%	9,370	100%
OKLAHOMA							
	Likely	8	18.6%	13,426	18.4%	21	11.2%
	Uncertain	10	23.3%	20,635	28.3%	59	32.1%
	Unlikely	25	58.1%	38,961	53.4%	104	56.7%
	Total	43	100%	73,022	100%	184	100%
TOTAL WEST	Likely	189	38.7%	292,126	39.9%	8,306	51.3%
	Uncertain	56	11.5%	95,154	13.0%	1,641	10.1%
	Unlikely	244	49.9%	344,039	47.0%	6,254	38.6%
	Total	489	100%	731,319	100%	16,201	100%

All reserves in millions of tons

Note: Table excludes leases that have been relinquished, exchanged or consolidated, post-FCLAA leases, and leases outside of the 7 major western coal States.

SOURCE: Office of Technology Assessment

Using the information on lease development and production status and lease ownership histories, OTA projected the likely section 3 compliance status of the 489 western pre-FCLAA leases. The aggregate results of this analysis are shown in table 13. The results of this analysis by State are shown in table 14.

OTA estimates that 189 leases will comply with the section 3 production requirement. These leases contain over 8.3 billion tons of coal, slightly over half of the pre-FCLAA lease reserves. In making these estimates, OTA assumed that lessees with active mines with producing Federal leases would form LMUs if necessary to satisfy the section 3 "producing in commercial quantities" requirement for any nonproducing pre-FCLAA leases in their mines.

OTA found 56 leases with 1.6 billion tons of coal that are uncertain to comply with the section 3 producing in commercial quantities requirement. Leases were rated as "uncertain" if: 1) the mine was not producing at a rate of 1 percent of reserves annually; or 2) it has no reported coal contracts and the existing regional mine capacity is 100 to 150 percent of projected regional demand in the year the lessee's section 3 deadline occurs; or 3) the mine has not yet begun Federal coal production and the lessee must form an LMU with non-Federal coal. Many of the mines with uncertain status could comply with section 3 if an LMU were approved, but the terms of some non-Federal coal leases or the amount of reserves involved may make it undesirable to do so. OTA believes that most of the leases in the uncertain compliance category could eventually comply with section 3, however some lessees may be disqualified briefly and others may have to relinquish or sell some nonproducing reserves so that their actual production levels meet the 1 percent commercial quantities test.

TABLE 15

REASONS FOR PROJECTED SECTION 3 COMPLIANCE STATUS
FOR PRE-FCLAA LEASES IN 7 WESTERN STATES

STATUS	LEASES	%	ACRES	%	RESERVES	%
Likely to Comply	189	38.7%	292,126	39.9%	8,306	51.3%
Producing commercial quantities	169	34.6%	248,364	34.0%	6,686	41.3%
Will produce commercial quantities	13	2.7%	30,994	4.2%	1,610	9.9%
Reserves "mined out"	7	1.4%	12,768	1.7%	10	0.1%
Uncertain to Comply	56	11.5%	95,154	13.0%	1,641	10.1%
Limited coal demand	35	7.2%	64,066	8.8%	978	6.0%
Non-Federal LMU approval required	21	4.3%	31,088	4.3%	663	4.1%
Unlikely to Comply	244	49.9%	344,039	47.0%	6,254	38.6%
Limited coal demand	178	36.4%	266,980	36.5%	4,085	25.2%
Suitable for onsite use only	13	2.7%	19,093	2.6%	1,264	7.8%
Unfavorable development potential	53	10.8%	57,966	7.9%	905	5.6%
TOTAL	489	100.0%	731,319	100.0%	16,201	100.0%

All reserves in millions of tons.

SOURCE: Office of Technology Assessment

OTA found 244 leases that are unlikely to satisfy the section 3 production requirement. Table 15 summarizes the reasons why OTA believes these leases will not be producing. Lack of markets was the major reason for nonproduction for 178 leases with over 4 billion tons of reserves. These leases generally have good quality minable reserves which are comparable in mining cost to reserves currently being mined, but under the current coal demand outlook, these reserves are unmarketable. Another 13 leases with over 1.2 billion tons of reserves are also currently unmarketable, but these reserves were found by OTA to be suitable only for onsite or near site use for power generation or synthetic fuels production. Unfavorable development potential, i.e. insufficient or poor quality reserves, bad mining conditions, access problems, and environmental conflicts, were the primary reasons why 53 leases with about 900 million tons of reserves would not be producing.

Under the most optimistic mine development schedule, a minimum of 18 months is needed to begin producing once a mine has been permitted. Given this minimum lead time, coal leases that have not yet been permitted or are not associated with a producing mine are unlikely to be producing in commercial quantities by August 4, 1986, the earliest section 3 "deadline" for Federal coal lessees. OTA estimates that 170 leases that have been held for 10 years are unlikely to be producing in commercial quantities by August 4, 1986; another 27 are uncertain to comply on that date. (See table 13). For leases with later section 3 production dates, we estimate that there are 91 leases that are unlikely to comply and 29 leases with uncertain compliance status These lessees face a section 3 nonproduction penalty unless they sell or turn back any leases with compliance problems.

The section 3 production requirement applies only indirectly to the existing leases. Nothing happens to the noncomplying lease, it is not terminated or subject to economic penalties under existing law. Section 3 penalizes the lessee by disqualifying that person or corporation and all related business entities from acquiring any new Federal onshore mineral leases as long as the old lease is in noncompliance. OTA has determined that the 300 leases that are uncertain or unlikely to comply with section 3 are held by about 120 different lessees. The 120 lessees include leaseholders who hold only a percentage interest of a lease or who share an undivided interest in a lease. When the leaseholdings are attributed back to parent corporations and joint venture partners, about 87 distinct controlling entities are affected. These affected entities include 20 individuals or joint family holdings and 67 corporate and other business entities. These other business entities include partnerships, business trusts, a university, and a church. The ownership patterns of Federal coal leases and the impacts of section 3 on major leaseholders are discussed in the following section of this report.

Section 3 and Federal Coal Lease Ownership

Analysis of lease ownership information is essential to an understanding of the potential impacts of section 3 and proposed amendments to it. This section summarizes changes in lease ownership and coal production patterns on western public lands since the passage of FCLAA and discusses some of the complex ownership arrangements that could affect a company's susceptibility to section 3. The industry groups and companies most likely to face section 3 sanctions are identified.

BUSINESS STRUCTURE OF CURRENT LESSEES

Title to the 615 existing leases are held by some 220 different lessees. These included corporations, partnerships, individuals, trustees, trusts, joint ventures, and other business entities.[2] Because the section 3 noncomliance status of the title holder is attributed to related business entities, it is necessary to determine whether a lessee is owned by or under the control of another party.

OTA identified some 114 lessees that are actually subsidiaries of other companies. There are 51 lessees who hold leases in the name of the sole or parent corporation and 14 lessees that are joint ventures of two or more companies. (see table 16). One of the largest leaseholders, Peabody Coal Co., is a subsidiary of Peabody Holding Co. which is owned in turn by a consortium of five other companies.

Five coal lessees are actually trusts or trustees for individual beneficiaries. Under one unusual arrangement Bank of America holds four New Mexico leases as trustee for a trust established by the former lessees, two southwestern utilities. Shares in the trust are being sold to investors. Before establishing the trust, the beneficiary utilities subleased all the mine operating rights in exchange for an overriding royalty. The coal mined from leases is burned in a powerplant operated by one of the lessees. In another unusual ownership structure, an Oklahoma lessee is acting as the "nominee" for two banks which may own the leases or are acting on behalf of others. Thirty-five individuals also own Federal coal leases. A list of current coal lessees and their parent companies can be found in Appendix D.

OVERVIEW OF FEDERAL COAL LEASE OWNERSHIP TRENDS 1975-85

Control of Federal coal leases has generally been transferred by one of two methods, assignments and corporate acquisitions. Between August 1976 and the beginning of 1985 about half of all pre-FCLAA leases were either assigned or transferred through a corporate acquisition, or both. Figure 4 shows how current lessees initially acquired their leases.

An assignment is the transfer of the legal title to a Federal coal lease from one party to another. Assignments also include any transfer of a shared partial interest in the lease and lease segregation, the subdivision and transfer of a portion of the leased acreage through creation of a separate new lease. OTA excluded all assignments to a party that is controlled by or affiliated with the assignor from its analysis for section 3 purposes. Lease assignments among unaffiliated entities have occurred at least 177 times between the passage of FCLAA and March 1985 involving some 147 leases. At least 79 such ownership transactions have been completed. As of the beginning of 1985, assignment applications involving several dozen additional leases were pending before the Bureau of Land Management (BLM).

Control of Federal coal leases can also change with the transfer of ownership of the lessee company to another company, even though the legal title to the lease remains unchanged. Since passage of FCLAA, 17 corporate acquisitions affecting the ownership of leaseholding companies have been completed. These acquisitions involve approximately 154 leases and are shown in table 17.

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[2] See U. S. Congress, Office of Technology Assessment technical memorandum, Patterns and Trends in Federal Coal Lease Ownership 1950-80, (Washington, DC: U.S. Government Printing Office, March 1981) OTA-TM-M-7, at 6-8 for a more exhaustive discussion of various types of business organizations that hold leases.

Table 16

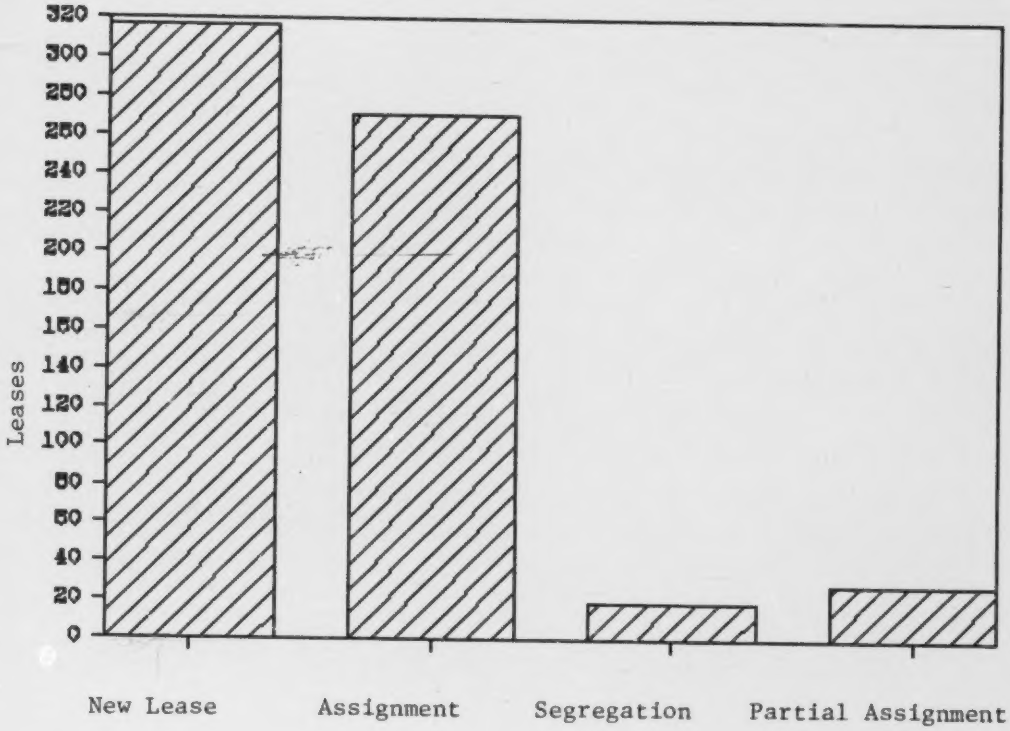
JOINT VENTURES OWNING FEDERAL COAL LEASES

Joint Venture (Subsidiary)	Participants
Arch Minerals (Ark Land)	Ashland Oil (50%) Hunt Enterprises(25%) Hunt Petroleum Corp.(25%)
Black Butte Coal Co.	Peter Kiewit Sons, Inc. Union Pacific Corp. (Rocky Mountain Energy Co.)
Bridger Coal Co.	Pacific Power & Light Co. Idaho Power Co.
Colowyo Coal Co.	W. R. Grace & Co. Hanna Mining Corp.
Cumberland Coal Co.	Peter Kiewit Sons, Inc. Union Pacific Corp. (Rocky Mountain Energy Co.)
Fort Union Mine Partnership	Frontier Coal Co. (90%) (American subsidiary of Total Petroleum, a French Company) Transit Coal Co. (10%) (Subsidiary of Frontier Coal Co.)
Grand Mesa Properties, Inc.	Eastern Gas & Fuel Associates NICOR, Inc.
Carbon Coal	Hamilton Bros Joint Venture (80%) Hamilton Bros Oil Co. Hamilton Bros Exploration Co. Hamilton Bros Corp.
Hayden Gulf West Coal Co.	W.R. Grace & Co. Hanna Mining
Medicine Bow Coal Co.	Arch Minerals: Ashland Oil (50%) Hunt Enterprises(25%) Hunt Petroleum Corp.(25%) Union Pacific Corp. (Rocky Mountain Energy Co.)
P. I. I. West Ltd.	Petroleum International, Inc. Westhoff Brothers Inc.
Powderhorn Properties	Eastern Gas & Fuels Associates NICOR, Inc.
Salt Creek Mining Co.	Occidental Petroleum Corp. Colorado-Ute Electric Association
Snowmass Coal Co.	Eastern Gas & Fuels Associates NICOR, Inc.

SOURCE: Office of Technology Assessment

Figure 4.

How Federal Coal Leases Were Acquired



Source: Office of Technology Assessment

As with assignments, several corporate transactions affecting Federal leases are pending completion or have been completed after the preparation of the OTA database used in this study. These include: the purchase of Kaiser Steel Co.'s western coal operations by a subsidiary of Perma Resources Corp.; the sale of some of Texaco's coal operations acquired in its purchase of Getty Oil Co. to Cypress Mining, an independent company recently created by a spinoff from AMOCO: and the purchase of Soldier Creek Coal Co. by SUNEDCO, a subsidiary of The Sun Co.[3] Control of some leases has been affected by both assignments and acquisitions. In addition to assignments and acquisitions, there are other types of ownership changes involving Federal leases, such as changes in joint venture partners. These transactions, although important for the purposes of interpreting section 3 impacts, affect a small number of leases.

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[3] **Coal Week, July 1, 1985.**

Table 17

CORPORATE ACQUISITIONS AFFECTING LESSEES SINCE PASSAGE OF FCLAA

Company:	Acquired By:
Sunland Mining	Pyro Energy Co.
Energy Fuels Co.	Getty Oil Corp.
Getty Oil Corp.	Texaco, Inc.
Kemmerer Coal Co.	Gulf Oil Corp.
Gulf Oil Corp.	Chevron Corp.
Empire Energy Co.	Standard Oil of Indiana Co.(AMOCO)
Peabody Coal Co.	Peabody Holding Co.
Cambridge Mining Co.	General Exploration Co.
Anchor Coal Co.	Fluor Corp.
Consolidation Coal Co.(CONOCO)	E.I. du Pont de Nemours & Co.
Swisher Coal Co.	Atlantic Richfield Co.
U.S. Fuel Co.	Sharon Steel Corp.
Utah International, Inc.	Broken Hill Proprietary, Ltd.
Belco Petroleum Corp.	Internorth Corp.
Midcontinent Limestone	Pitkin Iron Corp.
Western Slope Carbon Co.	The Williams Companies
Energy Reserves Group, Inc.	Broken Hill Proprietary, Ltd.

SOURCE: Office of Technology Assessment

OWNERSHIP AND PRODUCTION BY INDUSTRY CATEGORY 1975-85

OTA has previously summarized the changes in lease ownership patterns for 13 different industry categories from over 30 years. That information is updated here for the 11 categories still active in Federal leasing. The industry categories were selected in 1979 based on historical patterns existing then; each separate group or company controlled at least 5 percent of acreage under lease at one or more of the 5-year intervals used in the analysis. This information is useful in defining the types of companies that are active in the Federal coal leasing program and in assessing potential impacts of policy changes on them. The 11 industry categories and the companies in each are listed in the appendix.

Table 18 shows the total Federal lease acreage held by each industry category in 1975, 1980 and late 1985. (Individual leases vary in size from 40 acres to over 10,000 acres, so that acreage provides an alternative indication of the relative size and importance of leaseholdings.) The electric utility industry has been and continues to be the largest industry group holding leases. Utilities have increased their share of Federal lease acreage over the past five years. The major oil companies category is the third largest group of leaseholders, and if the holdings of the DuPont subsidiary Conoco are added, the major oil companies actually control over 190,000 leased acres, making them the second largest group. The holdings of independent coal companies and individuals (many of whom were lease brokers or speculators) have dropped precipitously over the past decade. Nonresource-related diversified companies significantly increased their leaseholdings during the same period. This group includes large chemical companies, such as DuPont. Another growing category are companies in the "other" category,

TABLE 18

OWNERSHIP OF FEDERAL COAL LEASES BY INDUSTRY CATEGORY - 1975, 1980, AND 1984

BUSINESS CATEGORY	OWNERSHIP Acres	1975 %	OWNERSHIP Acres	1980 %	OWNERSHIP Acres	1984 %
Utilities	142,077	19%	163,259	21%	204,567	22%
Other Co's.	70,124	9%	84,367	10%	189,159	20%
Oil majors	138,409	18%	155,024	20%	141,157	15%
Nonres. Divers. Co's.	12,580	2%	35,675	5%	85,211	9%
Oil & Gas Co's.	42,193	5%	45,926	6%	70,365	8%
Steel Co's.	49,448	6%	60,015	8%	61,986	7%
Coal Co's.	92,825	12%	87,601	11%	55,247	6%
Metals & Mining Co's.	49,377	6%	17,620	2%	40,229	4%
Natural Gas Co's.	32,522	4%	36,317	5%	36,231	4%
Peabody Holding Co.	68,923	9%	62,009	8%	20,382	2%
Individuals	66,515	8%	43,215	4%	18,553	2%
TOTAL	764,993	100%	791,028	100%	923,087	100%

NOTE: Acreage includes all existing Federal coal leases, but excludes relinquishments.

SOURCE: Office of Technology Assessment

which embraces such diverse businesses as railroads, banks, cement producers, and construction companies. (Although section 2(c) of the MLA prohibits the land grant railroads from owning Federal coal leases except for their own use, they nevertheless hold interests in Federal coal leases. Several leases are held by joint ventures between the railroad's mining subsidiaries and other firms and thus avoided the 2(c) ban. According to lease records, the assignment of two small New Mexico leases to the mining affiliate of the Santa Fe Railroad was approved by the Department after 1981, despite the statutory prohibition).

The aggregate data in table 18 are the result of a large number of transactions involving lease and lessee ownership. The aggregate totals for the business categories are in some cases unaffected by transactions between companies in the same group, such as Chevron's acquisition of Gulf Oil Corp. Also, transfers of leases between companies in different industry categories were often partly or completely offset by other transactions. Gulf Oil Corp.'s purchase of Kemmerer Coal Co., for example, greatly increased the holdings of the oil majors, but DuPont's purchase of Conoco, Inc. resulted in the removal of a large number of leases from that group.

Tables 19, 20 and 21 shows how lease ownership by industry category and the amount of Federal coal produced from those leases changed over the past decade. In the mid-1970s, electric utilities were by far the largest producers of Federal coal, independent coal companies and metals and mining companies also produced a disproportionately large amount of coal compared to the number of acres they held under lease. In contrast the share of total Federal coal production of many lessees involved in oil and gas operations, including major oil firms, natural gas pipeline companies, and smaller oil and gas companies, was substantially less than their proportionate share of Federal lease acreage.

Production patterns on Federal lease tracts have changed dramatically since the mid-1970s. Major oil companies, which produced only minimal quantities of Federal coal in the mid-1970s and which were accused by some of deliberately holding coal land out of production in order to raise the price of oil, have emerged as perhaps the dominant coal producers in the West. Small oil and gas companies and metals and mining companies now produce a higher percentage of coal than predicted by the size of their holdings, while the remaining industry categories underproduce relative to the size of their holdings.

The ownership and production patterns of Federal coal leases have also changed since FCLAA was passed. One of the concerns of Congress was to limit two practices which held potential for speculative gain from Federal reserves: (1) holding reserves with no intent of production for later resale at a profit to others; and (2) deferring production from Federal reserves with the expectation of mining the coal when the price of coal rises or mining costs decline generating greater profits in the future than could be gained by mining now. The potential for speculation by individuals and small companies without the technical or financial capability of mining coal has declined markedly as many of their leases have been transferred to companies in other business categories. However, many large companies continue to hold sizable undeveloped lease tracts that are not in production, suggesting that the potential for reaping greater future profits through the strategic holding of nonproducing reserves by firms capable of mining coal still exists. Coal production has grown substantially in a decade, yet about 40 percent of the existing leases are still undeveloped.

Appendix A contains a brief discussion of the current leaseholdings of major industry categories and the significant changes since 1975.

Table 19

OWNERSHIP AND PRODUCTION OF FEDERAL COAL LEASES
BY INDUSTRY CATEGORY - MID 1970'S

BUSINESS CATEGORY	OWNERSHIP Acres	1975 %	PRODUCTION Million Tons	1972 %
Utilities	142,077	20%	4.8	47%
Oil majors	138,409	19%	0.5	5%
Other Company	63,276	9%	0.5	4%
Nonresorce related Diversified Companies	12,580	2%	0	0%
Steel Companys	49,448	7%	0.8	7%
Peabody Holding Co.	68,923	10%	0	0%
Oil & Gas Co's.	42,193	6%	0.2	2%
Metals & Mining Co's.	49,377	7%	1.2	12%
Natural Gas Co's.	32,522	4%	0	0%
Coal Co's.	58,837	8%	2.0	20%
Individuals	66,515	9%	0.3	3%
TOTAL	724,157	100%	10.3	100%

SOURCE: Office of Technology Assessment

TABLE 20

OWNERSHIP AND PRODUCTION OF FEDERAL COAL LEASES BY INDUSTRY CATEGORY - ABOUT 1980

BUSINESS CATEGORY	OWNERSHIP Acres	1980 %	PRODUCTION Million Tons	1979 %
Utilities	163,259	21%	17.8	30%
Oil majors	155,024	20%	9.9	16%
Coal Co's.	87,601	11%	4.4	7%
Other Co's.	84,367	10%	5.2	9%
Peabody Holding Co.	62,009	8%	2.2	4%
Steel Co's.	60,015	8%	1.3	2%
Oil & Gas Co's.	45,926	6%	5.3	9%
Individuals	43,215	5%	0.7	1%
Natural Gas Co's.	36,317	5%	2.4	4%
Nonres. Divers. Co's.	35,675	4%	1.0	2%
Metals & Mining Co's.	17,620	2%	9.3	16%
TOTAL	791,028	100%	59.5	100%

NOTES:
1. Reported Federal production is for closest available year.
2. Acreages have been adjusted to reflect lessee's proportionate share of joint holdings.

SOURCE: Office of Technology Assessment

TABLE 21

OWNERSHIP AND PRODUCTION OF FEDERAL COAL LEASES BY INDUSTRY CATEGORY - ABOUT 1984

BUSINESS CATEGORY	OWNERSHIP Acres	1984 %	PRODUCTION Million Tons	1983 %
Utilities	204,567	22%	22.5	20%
Other Co's.	189,159	20%	11.7	10%
Oil majors	141,157	15%	45.1	40%
Nonres. Divers. Co's.	85,211	9%	1.6	2%
Oil & Gas Co's.	70,365	8%	12.2	11%
Steel Co's.	61,986	7%	1.1	1%
Coal Co's.	55,247	6%	3.6	3%
Metals & Mining Co's.	40,229	4%	13.2	11%
Natural Gas Co's.	36,231	4%	2.1	2%
Peabody Holding Co.	20,382	2%	0.9	1%
Individuals	18,553	2%	neg	0%
TOTAL	923,087	100%	114.0	100%

NOTES:
1. Reported Federal production is for closest available year.
2. Acreages have been adjusted to reflect lessee's porportionate share of joint holdings.

SOURCE: Office of Technology Assessment

SECTION 3 COMPLIANCE STATUS OF INDUSTRY GROUPS

Table 22 shows the section 3 compliance status for the 11 different industry groups for the 489 pre-FCLAA leases in the seven major western coal producing States. It indicates the number of leases and leased acreage in each category that are likely to comply with section 3 production requirements and those with potential section 3 compliance problems, i.e. leases that are uncertain or unlikely to comply. (Note that table 22 reflects the total number of leases held by companies in each category. The total of the leases in each category exceeds the total of pre-FCLAA leases because some jointly held leases are owned by companies in different industry groups, so that one lease may appear in two categories. The total acreage figures have been prorated to reflect the percentage ownership for jointly held leases).

The business categories with the most leases at risk of noncompliance are the "other" companies, major oil companies, utilities, and the nonresource-related diversified companies. There are at least 50,000 acres of leaseholdings in each of these categories that are potentially noncomplying. Together these four industry groups hold 69 percent of the leased acreage unlikely to be producing in commercial quantities by the applicable section 3 deadlines.

TABLE 22

SECTION 3 COMPLIANCE STATUS
OF WESTERN PRE-FCLAA FEDERAL COAL LEASES
BY INDUSTRY CATEGORY

BUSINESS CATEGORY	ALL LEASES	LIKELY TO COMPLY			POTENTIALLY NONCOMPLYING		
	Acres	Leases	Acres	% Acres	Leases	Acres	% Acres
Other Co's.	148,336	32	56,730	38%	64	91,606	62%
Utilities	151,552	50	76,924	51%	48	74,628	49%
Nonres. Divers. Co's.	78,552	5	6,603	8%	41	71,919	92%
Oil majors	130,774	39	66,836	51%	51	63,938	49%
Steel Co's.	55,014	9	14,568	26%	31	40,446	74%
Metals & Mining Co's.	37,821	7	9,542	25%	28	28,279	75%
Coal Co's.	37,677	18	15,584	41%	23	22,093	59%
Oil & Gas Co's.	35,904	16	18,636	52%	13	17,268	48%
Peabody Holding Co.	20,257	6	7,907	39%	4	12,350	61%
Natural Gas Co's.	28,949	17	18,596	64%	7	10,353	36%
Individuals	6,513	3	200	3%	17	6,313	97%
TOTAL	731,319	189	292,126	40%	300	439,193	60%

NOTES:

1. "% Acres" means the percent of total acreage held by an industry in each category.

2. Total acreage does not include post-FCLAA leases or leases located outside the seven major western States, or relinquished leases.

3. The number of leases includes all leases for which one or more of the lessees' parent companies fall into the designated industry category. The number of leases in each category reflects the total of all leases held by lessees in each category and exceed the total of pre-FCLAA leases because jointly held leases owned by companies in different categories appear in each category. The total number of leases has been adjusted to avoid double counting of these 40 leases. Acreages have been prorated to reflect the ownership percentages of joint lessees.

4. All ownership data is current as of Sept. 1, 1985.

SOURCE: Office of Technology Assessment

Table 22 shows the percentage of leased acreage held by each industry group that is unlikely to comply with section 3. On a total acreage basis, the industries that are apparently least impacted by section 3 noncompliance are natural gas companies, oil and gas companies, utilities, and the oil majors; at least half of their acreage holdings are likely to be in compliance. Nearly all of the leased acreage held by unincorporated individuals, some 96 percent of their holdings, are unlikely to be in production. Other industry groups with a large percentage of total lease acreage at risk of noncompliance with section 3 are nonresource-related diversified companies and steel companies.

THE 20 LARGEST FEDERAL COAL RESERVES HOLDERS

OTA ranked the 20 major Federal coal lessees by their Federal reserves holdings. The results are shown in table 23. Together these lessees control approximately 65 percent of all Federal coal reserves under lease, or about 12.6 billion tons of coal. In table 23 the full recoverable reserves in which a lessee has an interest are attributed to the lessee's parent corporation. (Note: A lessee may own 100 percent or less of the lease or participate in a joint venture which owns a lease). Prorating of the holdings of individual lessees tends to obscure the extent of "control" or involvement of companies in the leasing program and diminishes their apparent stake in any changes to the laws regarding coal leasing. The total holdings of the top 20 companies or lessee groups were adjusted to eliminate any double counting of leases or reserves.

The susceptibility of these 20 lessees and their individual parent companies to section 3 sanctions from nonproducing leases under their control is shown in table 23.[4] The table shows the number of leases and the amount and percent of the lessees total reserves that are at risk of noncompliance with section 3, i.e. leases that were rated as uncertain or unlikely to comply with section 3. Approximately 47 percent of the reserves of pre-FCLAA leases held by the top 20 leaseholders are not likely to be in production by the section 3 deadlines applicable to them, but these represent 75 percent of all potentially noncomplying reserves. About 52 percent of the reserves held by the top 20 leaseholders are in lease tracts likely to meet section 3 production deadlines.

Fifteen of the top 20 reserves holders face potential compliance problems. Four lessees (Exxon Corp., Mobil Oil Corp., Amax, Inc., and Idaho Power Co.) will comply with section 3 for all their leases. One lessee group (Kaneb Services, Inc. and Northwest Life Insurance Co.) has only nonproducing post-FCLAA reserves that will be forfeited if not producing after 10 years. Two of the top 20 reserves holders, Swanton Corp. and the 3 southwestern utilities, are not likely to comply with section 3 for any of their leases. Montana Power Co. has one potentially noncomplying lease with negligible reserves for which a relinquishment has been filed.

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[4] Note: For the purpose of this analysis OTA has assumed that "control" exists when a company is owned in whole, or in part, by another and the lessee company is considered as a subsidiary or joint venture of the parent company. OTA has not attributed a controlling interestthrough investments in stock of publicly traded companies or in holding companies. We note that for some purposes, ownership of 10 percent of a corporation's stock is sufficient to be considered a "controlling" interest. There is some participation in the corporate affairs of some coal lessees through stock ownership by other coal lessees. For example, Chevron, which now owns Gulf, holds over 20 percent of the stock in Amax, another major Federal coal producer. Peabody Coal Co.is owned by the Peabody Holding Co., which is in turn owned by 5 companies, including The Williams Companies which also owns Western Slope Carbon, a Federal coal lessee. OTA has not in this report attributed section 3 compliance status to the stockholding companies in these cases. However, the Department of the Interior might elect to do so in enforcing section 3. OTA's definition and conclusions may not coincide with the Department's eventual position on this matter.

Table 23

THE TOP 20 FEDERAL RESERVE HOLDERS SECTION 3 COMPLIANCE STATUS

PARENT COMPANY OF LESSEES		TOTAL NUMBER OF LEASES	RECOVERABLE RESERVES UNDER LEASE (m.t.)	POTENTIALLY NONCOMPLYING		
				LEASES	RESERVES*	
1	Exxon Corp.	5	1,490	0	0	0%
2	Pacific Power & Light Co. [a]	31	1,453	10	427	27%
3.	Amax, Inc.	6	1,261	0	0	0%
4.	Atlantic Richfield Co.	13	1,242	3	51	4%
5.	DuPont [b]	35	1,135	31	1,049	93%
6.	Peabody Holding Co. [c]	11	1,019	4	800	79%
7.	Broken Hill Prop. Ltd. [d]	30	930	25	624	67%
8.	Texaco, Inc. [e]	17	927	5	800	86%
9.	Chevron Corp. [f]	38	803	24	725	90%
10.	Kerr-McGee Corp. [g]	5	736	3	398	54%
11.	The Sun Co. [h]	8	643	6	97	15%
12.	Shell Oil Corp.	4	641	2	240	37%
13.	Peter Kiewit Sons, Inc. [i]	13	582	3	70	12%
14.	Kaneb Services, Inc. & Northwest Life Insurance	2	445	0	0	0%
15.	United States Steel Corp.	19	438	12	339	83%
16.	Mobil Corp. [j]	1	424	0	0	0%
17.	Swanton Corp.	16	361	16	361	100%
18.	Arizona Public Service San Diego Gas & Electric Southern Ca. Edison	21	345	21	345	100%
19.	Idaho Power Co. [k]	3	329	0	0	0%
20.	Montana Power Co.	9	287	1	0	0%
	TOTAL**	264	12,593	150	5,976	47%

NOTES

* All reserves in millions of tons.

** Totals have been adjusted to avoid double counting of jointly held reserves.

a. Includes joint ventures.

b. Includes 14 leases in which CONOCO, subsidiary Consolidation Coal Co., and Chevron's Gulf Oil subsidiary each own 50%. The leases total 23,890 acres with 241 million tons of reserves.

c. Totals exclude leases and reserves on which relinquishments and assignments have been approved or are currently pending.

d. Includes subsidiaries Utah International, Inc. and Energy Reserves Group, Inc.

e. Includes Texaco's Lake DeSmet holdings and leases held by Getty Minerals, but does not reflect recently announced sale of Getty's coal operations to Cyprus Mining or sale of Getty's 50% share of the Skyline Mine in Utah to Coastal States Energy Co.

f. Includes 14 leases in which Chevron's Gulf Oil subsidiary and Dupont's Consolidation Coal Company subsidiary each own 50%. The leases total 23,890 acres with 241 million tons of reserves.

g. Does not include adjustments for pending I-90 lease exchange of part of the East Gillette tract in Wyoming.

h. Does not include Sun's recently announced purchase of Soldier Canyon mine in Utah from California Portland Cement.

i. Includes joint ventures.

j. Total leases reflect two Mobil leases in the Rojo Caballo Mine now reconsolidated into a single lease.

k. Includes joint venture Bridger Coal Co. with Pacific Power & Light Co.

SOURCE: Office of Technology Assessment

DuPont, the fourth largest lease holder has the largest number of leases and the most reserves at risk of noncompliance: 31 leases with over 1 billion tons of reserves. Peabody Holding Co., Texaco, Inc., Chevron Corp., and Broken Hill Proprietary, Ltd. all have at least 500 million tons of potentially noncomplying reserves. Most of Peabody's at risk reserves are in the uncertain compliance category because of insufficient production or difficulties in LMU formation. Appendix B contains a brief summary of the holdings of each of the top 20 lessees and their section 3 status.

Potential Effects of Section 3

Enforcement of section 3 will have a disparate effect on coal lessees. The provision would penalize equally a lessee that has made aggressive efforts to develop and operate a mine on its single lease but has fallen short of the needed production level at the time when section 3 is enforced, and a lessee that has held many leases for almost 20 years and has made only minimal effort and investments toward developing those leases. Section 3 will strike most heavily on major oil companies and other lessees that are actively involved in the Federal onshore oil and gas leasing program. (Offshore oil and gas leases are not affected by section 3.) Direct acquisition of oil and gas leases by competitive bidding, the simultaneous leasing or "lottery" system, and noncompetitive "over the counter" leasing would be cut off by section 3 for noncomplying firms. These companies would have to rely on the assignment market and operating agreements to acquire new Federal onshore oil and gas development rights. Many of the same companies would be relatively unaffected by section 3 enforcement if it were limited to coal, because of the large amount of undeveloped coal reserves they already hold under lease.

Section 3 enforcement will probably do little to force the sale or relinquishment of the 17 noncomplying leases held by individuals. Application of diligent production requirements or higher lease payments are more likely to affect these leases.

Section 3 enforcement is also likely to affect the operations of the Federal oil and gas leasing program to a greater extent than the coal program primarily because of the vastly greater number of annual transactions in oil and gas leases. According to the annual publication, *Public Land Statistics*, there were nearly 130,000 oil and gas leases in effect in 1982 (most recent data available). Each year the Department handles about 45,000 assignments and transfers of interests in oil and gas leases. Each new lease will require a determination that the applicant or bidder and all related entities does not own or control any noncomplying Federal coal leases. (See table 24.) In contrast, there are only 615 Federal coal leases and about 130 pending coal preference right lease applications. On the average less than 20 coal lease transfers have been handled in any year over the past decade.

The Department finalized guidelines to assist it in determining whether a coal lessee is in compliance with section 3. However, it has not even proposed guidelines or regulations to assure that section 3 determinations will be made for oil and gas and other mineral lease transactions or that the Department will have the information it needs in a readily accessible form so that the other leasing programs will not be adversely affected. OTA believes that the Department could complete the necessary administrative steps to have an adequate enforcement process for section 3 in place before August 4, 1986 if it so chooses, but it has yet to make such a commitment.

Many of the major Federal coal lessees with potential section 3 disqualifications are also involved in other mineral activities. For example, 15 of the top 20 reserve holders face disqualification under section 3, if their pre-FCLAA leases are not brought into production. (See table 23.) Many of of these reserve holders are also involved to some extent in oil and gas

TABLE 24

FEDERAL ONSHORE MINERAL LEASES

Mineral	Public Domain Number of Leases	Public Domain Total Acres	Acquired & Military Lands Number of Leases	Acquired & Military Lands Total Acres	Total Number of Leases	Total Total Acres .
Oil & Gas	115,389	146,501,775	14,492	11,312,708	129,881	157,814,483
Coal	607	910,076	11	8,363	618	918,439
Tar Sand	12	21,270			12	21,270
Gilsonite	12	3,210			12	3,210
Phosphate	135	98,161	4	1,148	139	99,309
Potash	170	221,787			170	221,787
Sodium	124	179,870			124	179,870
Potassium	1	1,948			1	1,948
TOTAL	116,450	147,938,097	14,507	11,322,219	130,957	159,260,316

Source: United States Department of the Interior, Public Land Statistics 1983.

development, although not all of them currently hold Federal oil and gas leases. If Peabody's noncompliance status is attributed to its major owners, the Williams Companies might be foreclosed from Federal oil and gas leasing. The impact on noncomplying major oil and gas companies of section 3 disqualification could be significant. It is likely that most of them would divest themselves of their coal leases or coal operating divisions rather than forego the opportunity of oil and gas leasing on Federal land. The overall impact on the nation's oil and gas industry of section 3 would likely be slight given the competitive nature of the industry, the large number of companies with no involvement in Federal coal leasing, and the current oil glut. Moreover, at least two major oil company lessees, Exxon Corp. and Mobil Oil Corp., have no section 3 compliance problems and others are likely to resolve their compliance difficulties and avoid disqualification.

It is likely that the immediate impacts on other leasable energy minerals, oil shale, tar sands or gilsonite, would also be slight. No new oil shale leases could be issued to section 3 leaseholders, the near term impact of this restriction is probably nil since the oil shale leasing program is dormant for lack of interest. There are only four Federal oil shale leases outstanding. Leasing of tar sands or gilsonite deposits could also be affected. OTA has not determined how many applicants for these leases also hold Federal coal leases.

The section 3 disqualification would also apply to leases of phosphate, potash, sulfur, and sodium on Federal lands. Many of the nation's major fertilizer mineral producers are also Federal coal lessees. OTA has not analyzed the potential impacts on the issuance of fertilizer leases of section 3 disqualification. We note, however, that there is currently significant idle capacity in the domestic fertilizer industry according to the U.S. Bureau of Mines. A primary means for acquiring these leases is through prospecting permit preference right leasing systems which are similar to the system for coal leases that was repealed by FCLAA. Section 3, if it is interpreted to bar issuance of proven preference right leases, could restrict issuance of such fertilizer leases to section 3 leaseholders. Overall impacts on the fertilizer mineral industry of such a restriction would likely be minuscule. Coal lessees with interests in phosphate production include: Amax, Chevron, Mobil, W.R. Grace, Kerr-McGee, Montsanto, Occidental and CFI Industries. Potash producers include Kerr-McGee, Amax, IBI, Inc., and Gulf Resources & Chemicals. Kerr-McGee is a major sodium producer and Occidental Chemical is Frasch sulfur producer. States which may have Federally-owned fertilizer mineral deposits include Florida, Louisiana, Arkansas, North Carolina, Idaho, Wyoming, New Mexico, California, and Utah.

As noted above, the Department has not yet indicated how it will enforce section 3 for these other minerals. Only the regulations pertaining to coal leases now contain a provision forbidding issuance of new leases (and assignments) to section 3 leaseholders. Enforcement of section 3 is not, however, contingent on DOI's action to promulgate regulations or instructions for these minerals. In the oil and gas area, if the Department does not act, it can be expected that the Department's failure to demonstrate compliance with section 3 of FCLAA in issuing new oil and gas leases will be come an additional grounds for challenging lease awards, even if there is no apparent connection between the successful bidder or applicant and a noncomplying coal lessee.

SPECULATION IN FEDERAL COAL RESOURCES

OTA's 1981 report has often been cited by some as indicating that section 3 is no longer needed as a deterrent to speculation in Federal coal reserves because "speculators" have largely disappeared from the scene by the late 1970s. OTA disagrees with this interpretation because it defines the problem of speculation too narrowly and ignores a major concern of Congress in enacting section 3. It is true that one class of "speculators", the individuals, land agents and leasebrokers that were so active in the 50s and 60s in acquiring and then reselling Federal coal leases, have now largely disposed of their holdings. But, the Congressional and public concern over speculation in Federal reserves that prompted passage of FCLAA provisions was not limited to the actions of these individuals. OTA finds that the discussion of the issue in the 1974 report of the Ford Foundation Energy Policy Project succinctly summarizes what was perceived as the problem of speculation when FCLAA was passed. These observations are probably still representative of today's concerns, given recent changes in the Federal coal management program.

> Once the resource development rights are sold, the public, as consumer, has an interest in the development of those resources for its use at an early date and at a fair price. Assuming that energy prices are on the rise, if the lessee is allowed to sit on his lease without developing it, it will be costly to the public in two ways. The lessee will have "purchased" the development rights (if, in fact, he paid anything) with a lower payment to the treasury than at future prices; and by not producing his lease until some future time, he can sell the resource back to the public at a higher price than if he develops it immediately. The legal system is designed to encourage early production of the leased resources and thus discourage such private speculations. But Interior Department policies are having the opposite effect, contrary to the intent of the laws.
>
> By not requiring the lessee to either develop his lease or surrender it, the lessee, not the government is allowed to speculate with the public's resources. The nature of this speculation is quite simple. The resources are often leased at no cost or low cost relative to their actual present value, The initial lease terms are quite long and extensions are liberally granted. Holding costs in the form of rentals and minimum royalties are extremely low. Requirements for speed and diligence in developing the leased tracts are either lacking or not enforced. And leases can be transferred freely from owner to owner with a

> higher royalty to them than they pay the government. The existence of such overriding royalties is in itself a good indication that leases have generally been sold at less than their market value...
>
> This type of private holding without development is possible because coal leases are issued in perpetuity, although the terms and conditions are to be reviewed every 20 years. The law States that "leases shall be for indeterminate periods upon conditions of diligent development and continued operation of the mine." This provision can be abrogated only by a finding that it is in the public interest to do so. Contrary to the clear legal intent, the Department has allowed lessees to pay an advance annual "royalty" and has never enforced diligency requirements. The "royalty" is really simply an annual rental which for most leases is one dollar per acre...
>
> The problem, then, is quite sweeping: extensive leasing, combined with insufficient competition, little or no understanding of the value of the resources being leased, and no assurance of development. The public treasury does not receive a fair return for its resources nor does the public receive the energy from the resources under lease. The lease holders can sit on, or trade, their inexpensively acquired leases, waiting for higher energy prices before producing the resources.[5]

There are numerous references in the legislative history of FCLAA to concern over the entry of large energy conglomerates, big oil, and coal companies into the big coal leasing and the fear that they would sit on their Federal reserves waiting for the price to go up instead of mining them to meet domestic energy needs. Since 1976, the holdings of coal leases by oil majors and other large firms have increased. Concerns over the concentration of holdings by these companies and their effect on competition in the coal industry are not now as great as they were in 1974-78. Since 1976 the amount of Federal coal production by these lessees has also grown significantly providing evidence that many of this group are actively mining and selling coal and not sitting on large amounts of reserves awaiting future price increases. The coal mining subsidiaries of major oil companies are now among the largest coal producers in the West. Market expectations have also changed and coal demand has grown more slowly than projected in some high range forecasts. However even in 1985, billions of tons of leased Federal coal remain undeveloped. Oil majors and other energy conglomerates control a significant share of these nonproducing coal leases and for the next 10 years, section 3 is effectively the only production requirement imposed on these leases.

Whether the holding of nonproducing Federal coal leases is undesirable speculation from a policy standpoint is not a matter on which there is universal agreement. There are those who believe strongly as a matter of policy that Federal resources should be held only for production. There are also those who do not view speculation as an unwelcome aspect of Federal mineral policy. For example, the Fair Market Value Commission Report quoted the opinion of one of its witnesses on the issue:

> Speculators, far from being a personification of evil, in fact serve important social functions in that their actions indirectly provide useful information in the market, and smooth the transactions among inconstant fluctuations of supply and demand. Speculation which is in essence the

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[5] See Energy Policy Project of the Ford Foundation, A Time to Choose: America's Energy Future, (Cambridge, Mass.: Balinger Press, 1974) at 289-291.

> conservation of resources until their value in production is maximized, is actually legitimate economic behavior that serves the interests of society as well as the resource owner.[6]

The quote above demonstrates that when people talk about speculation and speculators, they often do not share the same definitions of such behavior. The first part of the quote above more accurately describes the activities of lease brokers, who played a historic role in coal leasing and now have largely disappeared. In the second part of the quote, the term resource owner most likely refers to the coal developer lessee and not the Federal Government.

The experience of the "energy shortage" and OPEC threats of the mid-1970s, have given away to the current situation of coal gluts and oil gluts. The coal markets have reverted from the perceived seller's market of the mid-1970s, which saw abrupt price increases and a scramble for long term contracts, to its historical buyer's market condition of substantial overcapacity where consumers are now seeking to avoid long term contract commitments. Most forecasts call for only modest increases in coal demand for two next decades. Few coal industry analysts are predicting any real price increase in coal due to mining out of available low cost reserves until the late-1990s, if then.

There is more coal under lease than can be sold or burned within the market areas served by Federal coal within the next two decades and beyond barring major realignment in power generation requiring massive investment in powerplant and synfuels plant construction. For various policy and other reasons, largely the desire to promote competition among potential suppliers and the necessary, but at times unbridled, optimism of coal companies in their reserves acquisition phase, it is likely that the amount of Federal coal under lease will exceed by a significant margin, the amount of coal expected to be needed by consumers. Many lessees will be unable to comply with lease development and production requirements despite even their most diligent efforts at securing purchasers for their coal. Allowing lessees to retain coal leases indefinitely without development in the same manner that companies might, for example, hold the coal reserves that they own outright, would be equivalent for policy purposes to transferring ownership of the reserves to private parties and runs contrary to the longstanding Federal policy against disposal of public coal resources. For this reason, the Federal leasing program will need some mechanism to determine which leases can continue to be held, and for how long, and which must be returned to the government for possible resale to others. Whether this mechanism will be section 3, the current diligence system, or some other provision is a matter for congressional consideration.

WHAT IS THE REVENUE GAIN OR LOSS TO THE FEDERAL GOVERNMENT FROM ENFORCEMENT OR REPEAL OF SECTION 3 WITHOUT PAYMENT REQUIREMENTS?

In the request letter to OTA, Congressman Weaver inquired whether the revenue impacts on the Federal Government from enforcement or repeal of section 3 could be estimated. Following a review of likely impacts, and discussions with Committee staff and others, OTA has concluded that it is neither useful nor practicable to to calculate the value of such gain or loss because of the countervailing effects of the impacts of section 3 and the extensive assumptions of fact that would have to be made.

However, we can discuss the issue in a more general manner. If section 3 is enforced, leases will be relinquished, the government will lose annual rental payments, and possibly royalties from leases that might have been mined. If the relinquished lease were resold later and brought into production, there might be an intervening revenue loss. On the other hand, any loss of revenues from relinquishments is offset by the revenues that might be gained from bonuses on resale of these leases and higher post-FCLAA royalties on production. (Bonus revenues, even if only at the current regulatory minimum bid level of $100 per acre would be significantly higher than the $1 to $3 per acre annual rental now paid on nonproducing leases). In addition to the financial benefits of enforcement, there are some general public policy benefits to be gained in limiting the potential for nonproductive, speculative holding of Federal resources and encouraging Federal lessees to develop their leases to increase competition in the coal markets.

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[6] See Statement of Daniel E. Klein, Commission on Fair Market Value Policy for Federal Coal Leasing: Report of the Commission, February 1984, at 296.

OTA does not believe that all of the leases that might eventually be relinquished would be reoffered in the next 10 to 15 years, particularly those outside of currently producing coal fields and those with poor quality reserves. It is unlikely that there would be enough interest in them if payment of fair market value were required. We also doubt that all of the noncomplying section 3 leases will be relinquished. We believe it is highly likely that lessees will find buyers for the better quality tracts and in some cases with little delay in the tract's overall development schedule. In this respect we agree with the conclusions of the Report of the Commission on Fair Market Value Policy for Federal Coal Leases that one of the main impacts of section 3 *could* be the creation of a new class of leaseholders. However, OTA believes that it is more likely that leases will be purchased by firms that are already active in western coal mining that either have no other Federal leases or are in compliance with section 3 and thus unaffected by the Department's ban on assignments to noncomplying lessees. (The Commission also noted that this impact might be beneficial to consumers because the new lessees might have lower barriers to entry because of lower prices paid for leases that had to be sold to avoid a section 3 penalty.[7] We are not certain that the impact of section 3 is necessarily lower prices for the Federal leases that are transferred privately, than leases sold by the government by competitive bid.)

If the section 3 noncompliance leases with favorable development potential are in fact transferred rather than relinquished, there might be little direct loss to the Federal Government because rentals would continue and royalties would be paid on production. It can be argued that if the lease were assigned rather than relinquished, that the coal might be mined at the lower pre-FCLAA royalty rates. OTA believes that given the three to seven years needed to bring an unpermitted lease into production, that it is likely that any period during which lower royalties would be paid would be short because at least 435 of the 535 pre-FCLAA leases are scheduled for readjustment by 1991. OTA notes that there is one major exception to this assumption. Between 1976 and present, there were an undetermined number of pre-FCLAA leases that the Department failed to readjust on time, or that had readjustments overturned on appeal and were not further contested by the Department. These unadjusted leases will carry the pre-FCLAA royalty rates and no regulatory diligent production requirements for 10 to 20 more years. This loss however is not due to section 3.

The repeal or modification of section 3 without requiring a significant payment obligation on nonproducing leases as the price of relief would represent a lost opportunity for generating additional revenues to the Government from pre-FCLAA leases. Does repeal create a windfall for the lessee? To find such a windfall, since there is no direct financial transfer to the lessee, requires that one assume that repeal makes the leases more valuable, but this would be hard to measure. One might assume that the effect of repeal would be to confer a gain on the lessee of the amount that the value of the lease might have been discounted to reflect the risk that it would lost for nondevelopment after 10 years. Such a theory, if valid in practice, would be more directly applicable to the Department's 1982 relaxation of diligence regulations for pre-FCLAA leases that previously faced possible cancellation in 1986 for nonproduction. Indeed the Commission on Fair Market Policy for Federal Coal Leases found such a windfall situation:

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[7] Report of the Commission on Fair Market Value Policy for Federal Coal Leases, at 303-304.

> The Commission also found that the 1982 extension of diligent development requirements for pre-1976 leases conferred a windfall gain on these lease holders that was unnecessarily generous. The Interior Department decided to allow pre-1976 lease holders to retain their leases in order to maintain an ample supply of Federal coal reserves under lease. This approach was neither equitable to the Government nor economically efficient.
>
> An alternative strategy would have been to attempt to cancel undeveloped pre-1976 leases (at their next adjustment date) and replace them with newly issued Federal leases. This approach might have generated substantial new revenues to the Government, instead of a large windfall gain for existing lessees. Assuming reasonable tract selection efforts, it might also have placed new, higher quality Federal tracts under lease, replacing tracts leased 20 or more years ago in a haphazard way. Such a strategy might have achieved environmental as well as economic benefits in the selection of tracts under lease.[8]

The Commission (two commissioners voting, three abstaining) recommended adoption of a system of gradually escalating advance royalties to be imposed on pre-FCLAA leases beginning at the next readjustment and on post-FCLAA leases as a means of extending leases beyond the 10-year statutory diligent development deadline. The Commission also was concerned that allowing such extensions for new leases issued between 1976 and any Congressional enactment of such an advance royalty scheme might also confer a windfall gain on those lessees who might have discounted their winning bids because of the inflexible 10-year diligence period.[9]

Section 3 does not deprive a lessee of the lease as a penalty, so any discount for the risk of nondevelopment for section 3 purposes is likely to be small. Moreover, the lessee can be purged of the section 3 disqualification by selling the lease, perhaps even at a profit. The lessee may relinquish the lease only as a last resort.

We think that it is unlikely that lessees in fact have discounted the value of their leases for the potential impacts of either section 3 or section 7 (or the 1976 diligence regulations). For lessees facing a section 3 disqualification in 1986, the largest group of noncomplying lessees, such discounting is particularly unlikely since they would have to foresee events occurring after they acquired the leases in order to reduce the amount they paid for them originally. It is also improbable that these lessees would also have foreseen the full extent of applicability of section 3. For leases sold or transferred after passage of FCLAA, there does not appear to be any discernible pattern of discounting for future nonproduction penalties in reported private lease sales. The reasons for this may be:

1. That the lessees fully expected to be able to mine or resell the reserves within the time allotted,
2. The reserves were already undervalued when they bought them, and/or

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[8] Id., at 301.

[9] Id. at 198.

3. That the lessees did not expect that either Congress or the Department would actually enforce section 3 or any diligence provisions applicable to the leases.

Although the loss may be impracticable to measure and may not be reflected in any discounting of the amounts paid for Federal coal leases, it is clear that the easing of development requirements confers something of value on the lessee. The lessee is permitted to keep a coal lease that he might otherwise have lost through revocation, relinquishment, or divestiture. A private lessor might seek some additional payment or other undertaking from the lessee as the price of extending or altering their lease arrangement. The most comparable private transaction would be delay rentals or other payments for the privilege of extending a lease without production.

The Market Outlook for Federal Coal

To support proposed changes in the current production requirements for Federal coal leases, it has been suggested that the market outlook for Federal coal has changed significantly since passage of FCLAA in 1976. Because actual demand has not grown as rapidly as projected in the mid-1970s, according to this argument, the impacts of enforcement of production requirements may be more punitive than anticipated by Congress in 1976 and some legislative or administrative relief is warranted. Recent years have seen a scaling back of coal demand projections for the next decade. Are estimates of probable future coal demand now substantially lower than forecast when FCLAA was under consideration, thus undercutting some of the concerns that lead to the adoption of FCLAA's stringent production requirements? To determine what the market outlook for Federal coal was in 1976, OTA reviewed legislative history materials and other published sources for information on expected demand for coal from Federal leases. We also looked at several later coal demand and production projections for the Federal coal leasing program and compared them with actual production for 1980 and 1984, and estimated 1985 production. The results of this exercise were inconclusive. Total U.S. and western Federal coal production have not in fact grown as dramatically as predicted in some mid-1970s high range forecasts. However, actual coal production does match reasonably well with some of the mid-range coal demand forecasts available to Congress in 1974-1976 and there, nevertheless, has been a substantial increase in western Federal coal production over the past decade.

Table 25 summarizes some of the major forecasts for total U.S. coal production published in 1974 to 1976. Forecasts cited in House and Senate reports on FCLAA are marked with an asterisk. All projections show anticipated increases from the 1974 actual production of 602 million tons. The 1980 mid-range projection ranged from 665 to 950 million tons. Actual 1980 coal output was 824 million tons, slightly above the midpoint in the forecast ranges. The 1985 forecasts show a much larger spread in the mid-range forecasts: from 820 million to 1,500 million tons. The projections include both supply forecasts (what could be produced if there was sufficient demand) and consumption forecasts (what actual coal use or demand was likely to be) under different assumptions about the rate of demand growth and the energy supply mix. For example, the Federal Energy Administration (FEA) developed both supply and demand forecasts for the Project Independence Blueprint Report, (P.I.B.), but did not fully integrate the two forecasts. The P.I.B. forecasts assumed that nuclear power would supply a far greater portion of electricity demand than proved to be the case. When only the 1985 demand based projections are considered, the mid-level range is narrower (820 million to 980 million tons).

Table 25

SELECTED FORECASTS FOR TOTAL U.S. COAL DEMAND IN 1980 AND 1985

Million Tons

	1980			1985		
	Low	Mid	High	Low	Mid	High
FEA P.I.B. Supply (1974)	895*	950	1,376	1,100	1,200	2,063
FEA P.I.B. Consumption (1974)	695		839	635	820**	1,005
Draft Coal Leasing EIS (1974)		665*			893*	
Final Coal Leasing EIS (1975) USDI projections		740			980	
USDI adjusted FEA projection				1,100	1,500	
National Coal Association (1974)					1,500*	
Ford Energy Policy Project (1974)				640	880**	1,120
Actual Production		824			888***	

* Estimate cited in FCLAA legislative history.
** Mid range calculated arithmatically.
*** Estimated.

Sources:

U.S. Federal Energy Administration, Interagency Task Force on Coal, Project Independence Blueprint, Final Task Force Report, 1974, Coal. Supply forecasts on p. 129. (House Report 94-681 on the Federal Coal Leasing Amendments Act of 1975, at page 9, cites the 1980 low and high values.)

U.S. Federal Energy Administration, Project Independence Report, 1974. Consumption forecasts, pp. 34-48 of Appendix. 1985 mid-range calculated arithmatically.

U.S. Department of the Interior, Draft Environmental Impact Statement, Proposed Federal Coal Leasing Program, 1974, page I-32. (House Report 94-681, at page 9, cites the EIS's projected coal demand in terms of trillion Btu rather than tonnage.)

U.S. Department of the Interior, Final Environmental Impact Statement, Proposed Federal Coal Leasing Program, 1975. The first set of figures are from Table 1-4, page I-25. The second set of figures represent USDI interpretation of the Project Independence supply forecast in the text on page I-28.

National Coal Association projection from testimony by Carl Bagge, in Hearings on the Federal Coal Leasing Program; before the House Committee on Interior and Insular Affairs, 93rd Cong., 2nd Sess., 1974, at 241.

Energy Policy Project of 1974, the Ford Foundation, A Time to Choose: America's Energy Future, page 296. Mid-range calculated arithmatically.

Total 1985 production is now projected by the Energy Information Administration (EIA) to be about 894 million tons, and is also at about the mid-point of the projected range.[10]

Table 26 summarizes forecasts for western and western Federal coal production published in 1974-1976. Table 26 shows projected production by State from the same projections and also includes for comparison several more recent projections used in setting regional leasing targets for the Federal coal management program. Actual 1980 production in the western coal States (Northern Great Plains and Rocky Mountain Coal Regions) of 196.4 million tons exceeded the level forecasted in the final Federal Coal Leasing Program EIS by 66.4 million tons. DOI forecasts of 1980 Federal coal production ranged from 43.0 to 125.7 million tons. Actual 1980 western Federal coal production of 68.8 million tons was in the lower end of this range.

The P.I.B. 1985 supply forecasts for western (Northern Great Plains and Rocky Mountain) coal regions ranged from 194.6 million tons under a business as usual scenario to 380.4 million tons with accelerated development. A 1976 FEA update for congressional testimony estimated 345 million tons for the same region in 1985. Actual 1984 production of 228.8 million tons was 34.6 million tons above the business as usual forecast but well below the high or accelerated development forecast. The EIA now projects that total 1985 production in the region will be about 260 millions tons.

Actual Federal production for FY 1984 of 103 million tons was at about the midpoint between the 1975 FEIS estimates, and quite close to the projections of 114.2 million tons in DOI's 1976 testimony. The State forecasts shown in table 26 are very close to actual 1984 State Federal coal production. The DOI's 1975 projections also match 1984 actual production closely, except for Colorado and Utah where production is much lower than forecast in 1975.

In summary, actual U.S., western and Federal production in 1980 and 1985 are reasonably close to the mid-level forecasts available to Congress when FCLAA was under consideration. After 1976, the forecast levels of western and Federal coal production were higher reflecting the anticipated impacts of higher world oil prices and Federal energy policy initiatives promoting expanded use of coal over other fossil energy sources. The Federal coal management program EIS published in 1979 and later DOE projections shown in table 27 reflect these expectations. The 1979 EIS projected 1985 U.S. production of over 1,116 million tons, higher than the 1974 P.I.B. high consumption forecast for the same year (See table 25). Mid-level western demand was projected at 400 million tons in 1985, 20 million tons higher than the 1976 P.I.B. accelerated development scenario and more than twice the P.I.B. business as usual forecast.

Since 1980, however, most energy demand forecasts have been scaled back. There have been dramatic adjustments downward of the DOE projections used to establish coal production goals for deciding how much coal should be offered for lease in Federal coal regions. Table 28 shows the changes in projected total U.S. and western demand for 1990 between the 1979 EIS and the 1985 Draft Supplemental EIS for the coal management program. The most recent 1990 mid-level forecast is 30 percent lower than the 1979 forecast. For 1990, the FEIS projected national production ranging from 1.1 billion to 1.85 billion tons and western production ranging from 382 million to 937 million tons. The 1985 draft environmental statement for the Federal coal management program, in contrast, projects national production in 1990 ranging from 1.03 billion to 1.1 billion tons and western production at 300 to 340 million tons under both its

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[10] U.S. Department of Energy, Energy Information Administration, Quarterly Coal Report, April-June 1985, (Washington, DC: U.S. Government Printing Office, October 1985), table 1.

TABLE 26

Forecasts for Western and Federal Coal Demand Circa 1976

1980 (million tons)

Total Production	CO	MT	NM	ND	UT	WY	TOTAL
1975 Coal Leasing EIS							130.0
Actual Production	19.5	36.1	16.5	17.2	13.1	94.0	196.4
Federal Production							
USDI, 1974 Hearing*	11.4	24.6	....	6.3	20.1	29.2	91.6
USDI, May 1975 Hearing*	24.3	15.5	3.0	1.7	16.1	65.2	125.7
1975 Coal Leasing EIS							43.0
USDI, 1976 Hearings*	7.2	18.3	1.8	....	7.6	49.6	84.5
Actual Production	9.4	10.4	6.3	0.6	8.7	33.4	68.8

1985 (million tons)

Total Production	CO	MT	NM	ND	UT	WY	TOTAL
FEA Energy Outlook (1974)							
Business as Usual							194.2*
Accelerated Development							380.4*
FEA (1976)							345.0*
Actual 1984 Production	17.8	32.9	25.9	20.2	11.0	121.0	228.8
Federal Production							
USDI, 1974 Hearing*	22.0	47.2	....	27.4	27.6	51.0	175.2
USDI, May 1975 Hearing*	35.9	15.7	4.0	1.7	19.6	68.7	145.5
1975 Leasing EIS (Low)							50.0
1975 Leasing EIS (High)							150.0
USDI, 1976 Hearings*	9.4	17.8	1.8	....	12.2	73.0	114.2
Actual 1984 Production	9.9	14.5	3.0	1.3	6.1	68.4	103.4

Sources:

U.S. Department of the Interior, Final Environmental Impact Statement, Proposed Federal Coal Leasing Program, 1975. The first set of figures are from Table 1-4, page I-25. The second set of figures represent USDI interpretation of the Project Independence supply forecast in the next text on page I-28.

USDI projections from Hearings on the Federal Coal Leasing Program before the House Committee on Interior and Insular Affairs, 93rd Cong., 2nd Sess., Part 1, at p.155.

USDI projections at pages 35-36, Federal Coal Leasing Amendments Act of 1975 Senate Hearings on S. 391, May 7 and 8, 1975.

USDI data from Oversight Hearings on Federal Coal Leasing. Before the Subcommittee on Mines and Mining of the House Committee on Interior and Insular Affairs, 94th cong., 2nd. Sess., 1976, at p. 26-27. Data based on production schedules in mine plan proposals on file in Geological Survey; Production from Indian coal has been subtracted out.

U.S. Federal Energy Administration, Interagency Task Force on Coal. Project Independence Blueprint, Final Task Force Report, Coal, 1974. Figures are for the Northern Great Plains and Rocky Mountain regions, cited at page 28, supra.

U.S. Federal Energy Administration, National Energy Outlook, 1976. Cited at page 28, supra.

Table 27

Comparison of 1979 and 1985 Coal Leasing EIS Coal Production Forecasts
(Proposed Alternative, in millions of tons)

	1979 EIS						1985 DEIS					
	1985			1990			1985			1990		
	Low	Mid	High	Low	Mid	High	Low	Mid	High	Low	Mid	High
Total U.S.	990	1116	1188	1114	1521	1857	n/a	n/a	n/a	1030	1076	1100
Far West*	308	400	447	308	400	447	n/a	n/a	n/a	277	278	316

* For 1979 EIS calculated from Table 2-17, page 2-30 by adding Northern Great Plains, Rocky Mountains and Southwest. For 1985 Draft EIS, calculated from Table 3-7, pages 98-100 by adding totals for each region.

SOURCE: Office of Technology Assessment

TABLE 28

SELECTED FORECASTS FOR WESTERN COAL PRODUCTION 1980-95

FORECAST	TOTAL WESTERN PRODUCTION * (Millions of Tons) 1980	1985	1990	1995
DOE Coal Production Goals (1981)				
Low	--	363	421	550
Medium	--	382	565	909
High	--	435	727	1274
DOI Coal Leasing FEIS (1979)				
Low	--	295	361	--
Medium	--	386	653	--
High	--	433	916	--
DOI Coal Leasing FEIS Supp.(1985)				
Proposed Action				
Low	--	--	287	334
Medium	--	--	305	355
High	--	--	316	399
No New Federal Leasing				
Low	--	--	288	335
Medium	--	--	304	355
High	--	--	316	398
EIA 1985 Annual Outlook	--	258	317	384
DRI Coal Review (Summer 85)	--	253	320	378
Actual Production	219	258(est.)		

NOTES:
Western Production generally includes the Northern Great Plains, Rocky Mountain, and Southwest Coal Production Regions and is roughly equivalent to the Federal Coal Production Regions for Colorado, Montana, New Mexico, North Dakota, Utah and Wyoming.

SOURCES: U.S. Department of Energy, The 1980 Biennial Update of National and Regional Coal Production Goals for 1985, 1990 and 1995, March 1981.

U.S. Department of the Interior, Bureau of Land Management, Final Environmental Impact Statement Supplement for the Federal Coal Management Program, October 1985.

proposed action and "no new leasing" scenarios. For the year 2000, its projections range from 1.35 to 1.8 billion tons nationally and 385 million to 615 million for western States.[11]

Thus, the projections about future coal demand that were available to the Congress and others in 1974-76 displayed a wide range of estimates. Some of these projections appear to have significantly underestimated western coal production in 1985, while overestimating national coal production. Other high-range forecasts, as one might expect, substantially overstated actual growth in coal demand. Whatever the differences in outlook, it was clear in 1976 that coal production would have to expand to meet even modestly increased national energy needs and that production from the currently idle Federal coal reserves could aid this growth.

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[11] United States Department of the Interior, Draft Environmental Statement for the Federal Coal Management Program, (Washington, DC: U.S. Government Printing Office, October, 1985) at 90.

OTA has previously written and testified concerning the demand for coal and the production potential of western Federal coal leases. The extent of market demand, not the availability of minable leased reserves will continue to determine how much coal is produced from Federal coal leases. In the next 10 years, as in the past, the potential production capacity of Federal coal leases greatly exceeds anticipated annual demand for coal in western Federal coal regions. The potential for increased coal production from Federal coal lease is substantial. In our 1981 report OTA found that mines with Federal coal could produce between 410 million to 550 million ton of coal per year in 1991 if there were sufficient market demand. Uncertainties in coal demand, rail construction, and synfuels development accounted for the 90 million range in potential 1991 production capacity. In 1981 there was over 100 million tons of unused production capacity in existing mines on Federal leases. Over 75 million tons of this overcapacity was in the Powder River basin alone. With the issuance of new competitive leases and preference right lease applications (with reserves of between 5 and 7 billion tons), the total annual production capacity of Federal coal leases in the 1990s could increase by 75 to 115 million tons in the 1990s.

In 1985 the market outlook for western coal is not nearly as optimistic as projected in the late 1970s. Figure 5 compares two DOE 1990 mid-level demand forecasts for the Fort Union coal region (North Dakota and eastern Montana), the Powder River basin (southeastern Montana and northeastern Wyoming), southern Wyoming, Colorado, Utah, and New Mexico. The first was made in 1980 in preparation for the 1981 Green River-Ham's Fork Federal coal lease sale and the second was made in 1985 for DOI's draft supplemental EIS on the Federal Coal Management Program. Total forecasted demand was halved from 543 to 278 million tons in 1990. All regions and States, except the Fort Union region showed a substantial drop in expected demand.

What happened? Various factors have contributed to the declines shown in the figures.

There has been a steady downward trend in forecasted electrical growth rates during the past ten years. In 1974 the utility industry expected annual growth rates of 7.4 percent. By 1984 annual growth in electricity demand had dropped to 2.5 percent. The demand for western coal is highly dependent on the electrical growth rate because about 90 percent of western production coal is used by electric utilities. Most of the decline in figure 5 is a result of this factor.

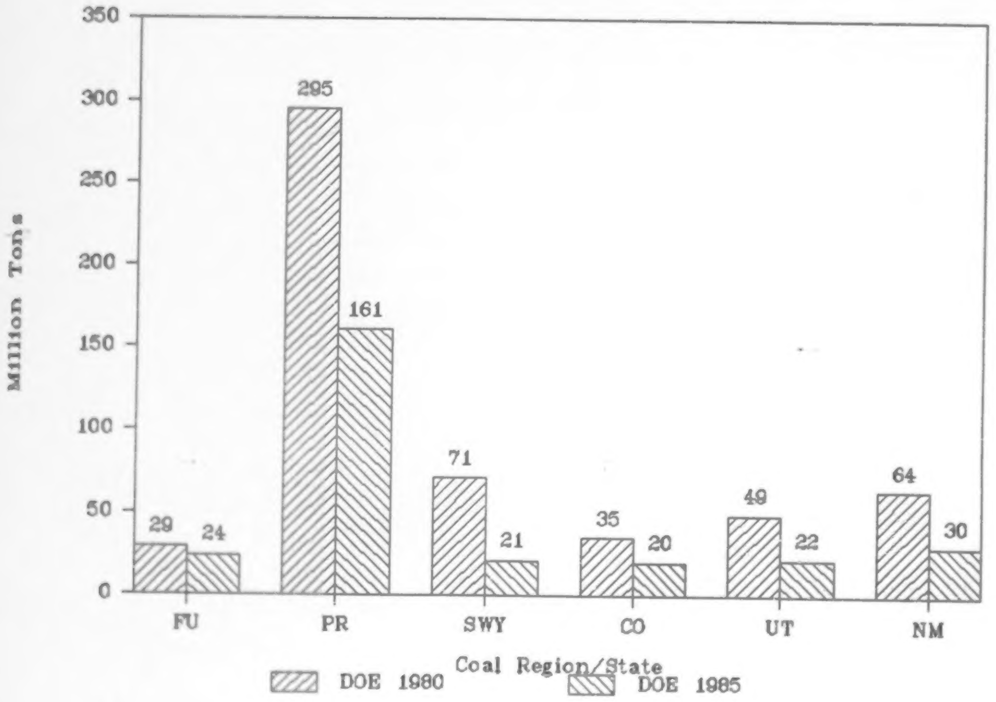
The low sulfur content of western coal is no longer a major factor promoting an increase in the West's share of total coal demand. There are various reasons for this. Scrubber and sulfur removal technologies are sufficiently advanced that utilities are no longer as reluctant to use them with local high sulfur coals. Boilers designed for mid-western and eastern coal must be derated or experience deterioration of heat rate when coal with lower heat content, such as that from the Powder River basin is burned.

Transportation costs from western coal regions to midwestern and southwestern consumers remain high. Higher transportation costs resulting from rail deregulation have hurt western coal more than eastern and midwestern coal because transportation costs are a high percentage of delivered cost of western coal.

Moderately stable oil and gas prices have reduced the rate of industrial boiler conversions and eliminated any significant coal demand for synthetic fuels production in the near future. Also, demand for western coal for export to Pacific Rim countries has not been as significant as expected in the early 1980s.

Figure 5.

Forecasted 1990 Demand



REGIONAL AND STATE PRODUCTION, CAPACITY AND DEMAND

Figures 6 through 11 show actual production in 1980 to 1984, permitted mine capacity, and projected production from 1985 to 2000 for the major western coal regions and States. The production capacity includes Federal and non-Federal mines with approved OSM permits and takes into account reserve depletion of Federal mines. The projected demand uses the DOE mid-level forecast (proposed action) for the years 1990, 1995, and 2000 in the draft supplemental EIS for the Federal coal management program. Actual demand for the period may well be lower, but is unlikely to be higher than shown.

Coal production has grown steadily in the Fort Union region (figure 6) with 99 percent of this coal from North Dakota mines. Projected demand exceeds capacity in 1995, but State enforcement of prevention of significant deterioration air quality standards may limit actual production to approved capacity or lower.

Coal production in the Powder River region has also grown steadily and is expected to continue at about the same rate to the year 2000 (figure 7). Approved capacity currently far exceeds demand for this period, but gradually declines to an 18 percent surplus in the year 2000.

Southern Wyoming has experienced a substantial drop in coal production in the last four years (figure 8). At forecasted levels, demand will exceed approved capacity in 1997.

Coal production in Colorado shows a modest decline in recent years (figure 9) and is expected to grow modestly during the next fifteen years. Approved capacities are well above forecasted demand until the late 1990s.

The level of coal production in Utah has varied in recent years and demand is expected to grow at rates similar to the 1980 to 1981 period (figure 10). Approved capacity is well above forecasted demand through the early 1990s and has a surplus of 12 percent in the year 2000.

New Mexico has experienced the greatest growth in coal production of the western coal States (figure 11). Demand is expected to grow at a similar rate and exceeds approved capacity in 1997.

Figure 6.

Fort Union Region: Capacity and Production 1980-2000

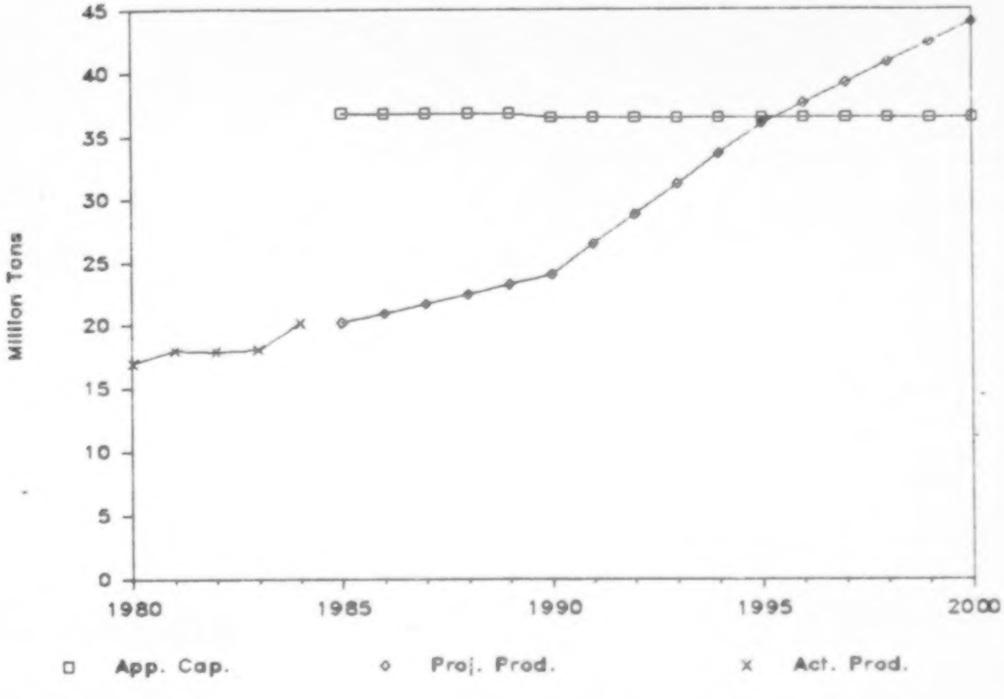


Figure 7.

Powder River Basin: Capacity and Production 1980-2000

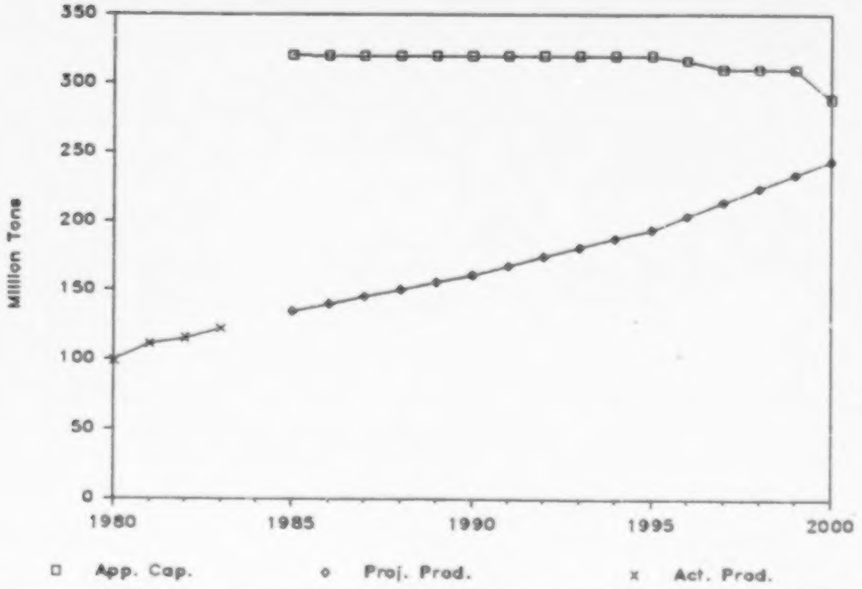


Figure 8.

Southern Wyoming: Capacity and Production 1980-2000

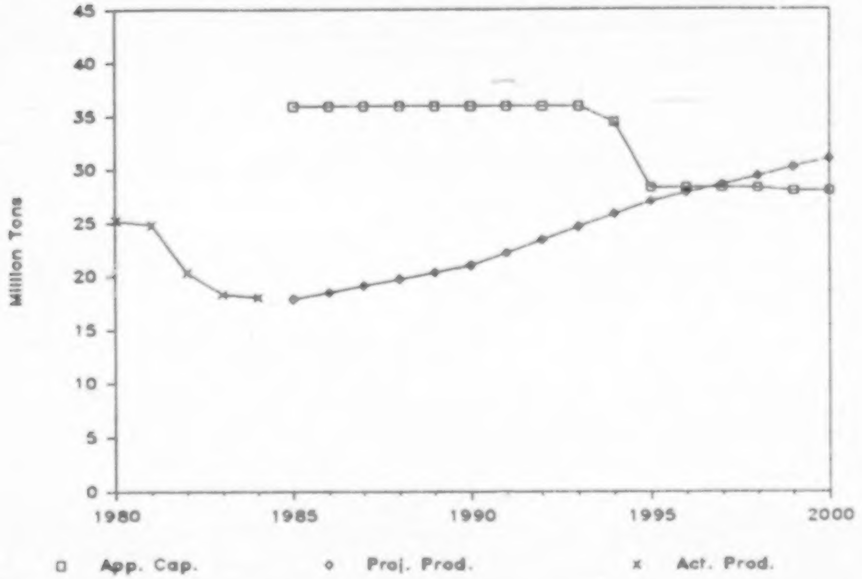


Figure 9.

Colorado: Capacity and Production 1980-2000

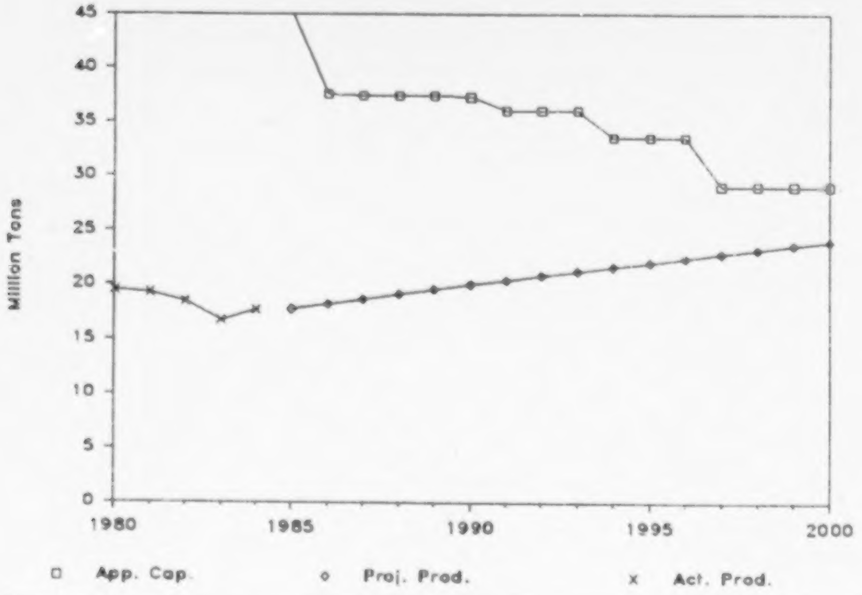


Figure 10

Utah: Capacity and Production 1980-2000

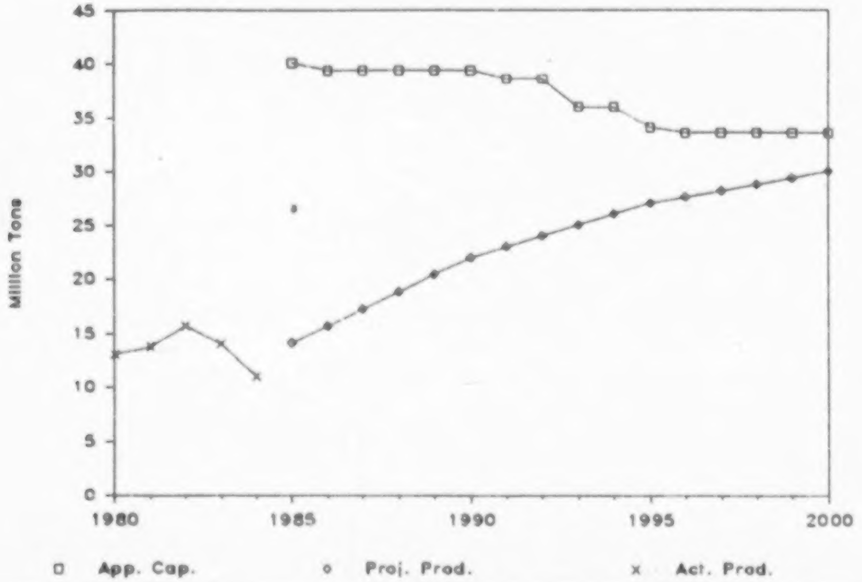
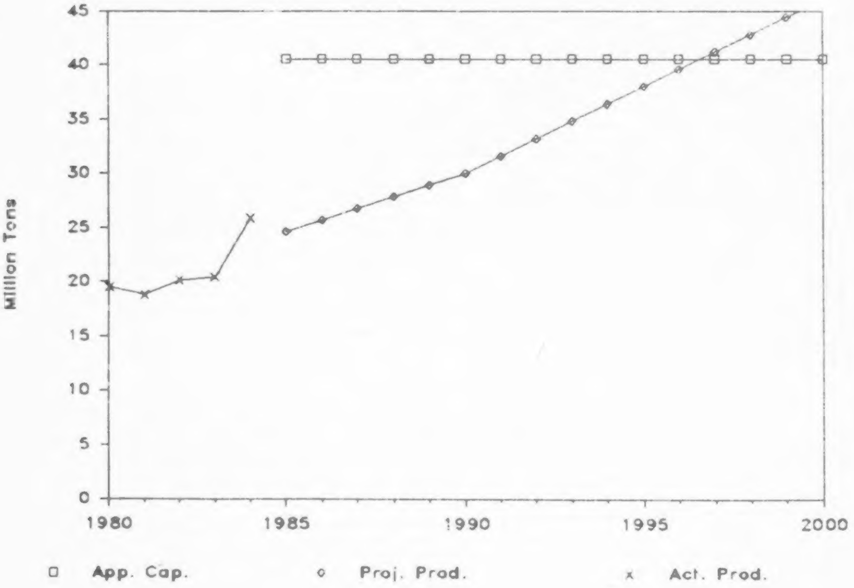


Figure 11.

New Mexico: Capacity and Production 1980-2000



CHAPTER 4

LEGAL AND LEGISLATIVE ANALYSIS: SECTION 3 AND OTHER PRODUCTION REQUIREMENTS FOR FEDERAL COAL LEASES

Federal coal leases impose various conditions on the lessee in return for granting of exclusive rights to mine and sell coal resources owned by the United States. This chapter analyzes the lease development and production obligations imposed under Federal law and how they have been interpreted and applied to Federal coal leases. The chapter concludes with an examination of several alternative mechanisms for encouraging timely production of Federal coal.

What Is Section 3?

Section 3 of the Federal Coal Leasing Amendments Act of 1976 (FCLAA) added a new section 2(a)(2)(A) to the Mineral Leasing Act of 1920 (MLA):

> The Secretary shall not issue a lease or leases under the terms of this Act to any person, association, corporation, or any subsidiary, affiliate, or persons controlled by or under common control with such person, association, or corporation, where any such entity holds a lease or leases issued by the United States to coal deposits and has held such lease or leases for a period of ten years when such entity is not, except as provided for in section 7(b) of this Act, producing coal from the lease deposits in commercial quantities. In computing the ten-year period referred to in the preceding sentence, periods of time prior to the date of enactment of the Federal Coal Leasing Amendments Act of 1975 shall not be counted.[1]

The phrase "this Act" is defined in FCLAA as the MLA.[2] Section 3 was intended to prevent a coal lessee, and any affiliated entities, from obtaining new leases if the coal lease has been held for 10 years and is not producing in commercial quantities. The first section 3 disqualifications were to be effective on August 4, 1986, however language added to the Fiscal Year 1986 Continuing Appropriations Act passed at the close of the 1st Session of the 99th Congress delayed the effect of section 3 to December 31, 1986.[3]

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[1] Public Law 94-377, 90 Stat. 1083, Aug. 4, 1976; 30 U.S.C. 201(a)(2)(A). The Act was passed in August, 1976, as the "Federal Coal Leasing Amendments Act of 1975." This oversight was corrected in Public Law 95-554, sec. 8, 92 Stat. 2075, Oct. 30, 1978, so that FCLAA is now properly cited as the "Federal Coal Leasing Amendments Act of 1976."

[2] See 90 Stat. 1083: "(b) except as otherwise expressly provided, whenever in this Act an amendment or repeal is expressed in terms of an amendment to, or repeal of, a section or other provision of the Mineral Lands Leasing Act, the reference shall be considered to be made to a section or other provision of the Act of February 25, 1920, entitled 'An Act to Promote the Mining of Coal, Phosphate, Oil, Oil Shale, Gas, and Sodium on the Public Domain' (41 Stat. 437)." As a result, section 3 of FCLAA is codified as follows: "The Secretary shall not issue a lease or leases under the terms of this chapter...except as provided for in section 207(b)...prior to August 4, 1976." See 30 U.S.C. 201(a)(2)(A) (1982). Section 201 (a)(2)(A) is found in Chapter 3A, Title 30 of the United States Code which is codification of the Mineral Leasing Act of 1920, 30 U.S.C. 181 et seq.

[3] H.J. Res. 465, 99th Cong., 1st sess., Dec. 19, 1985, Public Law 99-190. The text of the amendment extending the section 3 deadline is found at 131 Cong. Rec. H12,865, Dec. 19, 1985.

LEGISLATIVE HISTORY OF SECTION 3

The legislative history indicates that the purposes of section 3 were:

1. to deter speculation in Federal coal leases;
2. to promote the transfer of nonproducing leases back to the Government or to companies with the resources and capability to mine them;
3. to limit the control of nonproducing Federal coal reserves by large energy companies and conglomerates; and
4. to back up the diligence policies of section 7 and the 1976 regulations that required existing leases to begin producing within ten years.

In the Senate debate on passage of FCLAA, Senator Metcalf, then Chairman of the Senate Committee on Interior and Insular Affairs, described how section 3 and section 6 of FCLAA (which amended section 7 of the MLA) would work together:

> S. 391 states in section 6 that "any lease that is not producing in commercial quantities at the end of 10 years shall be terminated." Under the provisions of Section 3, the Secretary could not issue a new lease to any party holding such a nonproductive lease, the 10 year period to be computed from the effective date of the act.
>
> These two provisions are meant to guarantee diligent development and an end to speculative holding of leases. Contrary to what the Department claims, the two provisions are entirely consistent. The Secretary would simply be precluded from issuing any new lease to a party which had failed to produce coal in commercial quantities--as defined by regulations--within 10 years after the enactment of the bill. Such party would be required to divest itself of the unproductive lease before it would become eligible for a new lease.
>
> The bill would thus make it possible for other operators to bid for the nonproductive lease and undertake to develop the lease and produce coal in keeping with the intent of the legislation. In this way, over time, the large proportion of idle leases which have been held, by the Department's own admission, for purely speculative reasons, will eventually be brought into production and royalty payments commensurate with the value of the coal will begin flowing into the public treasuries.[4]

The section 3 disqualification strikes hardest at large oil and gas companies, coal companies, and other resource extracting conglomerates. The report, floor debate, and hearings on FCLAA are replete with expressions of concern by members over the concentration of holdings and speculation in Federal coal leases by these entities. The House report cites the conclusions of the Ford Foundation's Energy Policy Project.

> The coal leasing program presents a clear pictures of private speculation at the public expense. In the past decades, but particularly during the 1960s, vast amounts of Federal coal passed freely to private ownership under situations of little or no competition and extremely low payments.[5]

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[4] 122 Cong. Rec. 19,377, June 21, 1976.

[5] H. Rpt. 94-681, 94th Cong., 1st sess. at 11, (1975), citing Energy Policy Project of the Ford Foundation, (1974). A Time to Chose: America's Energy Future.

Representative Young of Georgia opened the House discussion of FCLAA by describing what he saw as the basic thrust of the legislation:

> This bill is designed to encourage coal production on Federal lands...Hopefully it will end the speculative holding of leases by requiring that coal is actually produced where leases have been obtained. In the past, coal operators -- including some of the giant mining and oil companies -- have gotten leases on these Federal lands and held them without actually mining the coal, just waiting for coal prices to rise to a level where huge profits would be assured. In effect, these companies have sat on large supplies of coal in a period when the consuming public is told we have an energy shortage.[6]

These comments were echoed in other congressional criticism of the speculative activities of lease brokers, and other individuals and companies that held coal leases for resale and did not mine coal. Representative Seiberling summarized some of the concerns over the effects of coal lease ownership trends on energy competition:

> Among other industrial giants, the big oil companies have been moving into coal in a very heavy way. As a matter of fact, over 30 percent of all the coal reserves in this country today are controlled by the oil companies. Incidentally they already control over 60 percent of the Nation's uranium reserves. Many other huge conglomerate corporations have moved into coal, and they hold a great many leases that have already been let on Federal coal.
>
> As a matter of fact, ... 5 of the 15 largest lessees of Federal coal are oil companies, and some of the others are huge corporations such as Kennecott Copper, which also owns Peabody Coal, the biggest producer in the United States...
>
> Therefore Mr. Chairman, we not only have the problem that many of these huge companies have gotten leases and then sat on the coal waiting for the price to rise, I suppose; but we have the problem of preventing monopolistic control of the Nation's coal reserves.[7] (The information referenced in the quote is reproduced as table 29.)

Many provisions of FCLAA were expressly intended to counteract the patterns of nonproductive lease ownership and concentration that had developed. FCLAA imposed a 10 year diligent production period on all new leases and provided that no lease could be extended beyond its initial 20 year term unless it was producing in commercial quantities. Other reforms include the elimination of preference right leasing, the establishment of a higher minimum royalty, the use of deferred bonus bidding, and the authorization of special leases for public bodies. (The higher royalty would have the effect of lowering the bonus payment required to constitute fair market value to reduce the entry cost for smaller companies and other new competitors in the Federal coal leasing.)

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[6] See 122 Cong. Rec. 484, Jan. 21, 1976.

[7] 122 Cong. Rec. 493, Jan. 21, 1976.

Table 29

The Top 15 Federal Leaseholders 1975
(Federal and Indian Lands)

	Federal	Indian	Total
Kennecott Copper Co.:			
Peabody Coal Co	81,981.29	100,345	
Kenn. Coal Co	2,736.14		
Total	84,717.43		185,062.43
2. Continental Oil Co.:			
Consolidation Coal	45,452.12		
½ of Consol and Kemmerer	9,372.97		
½ of Consol and El Paso		20,143.5	
Total	54,825.09		74,968.59
3. Utah International	24,229.61	31,416	55,645.61
4. Pacific Power & Light:			
Pacific Power & Light	35,078.15		
Decker	13,610.31		
Total	48,688.46		48,688.46
5. El Paso Natural Gas:			
El Paso	27,018.72		
½ Consol-El Paso		20,143.5	47,162.22
6. Garland Coal Co	40,559.40		40,559.40
7. Arizona Public Service and San Diego Gas & Electric Resources Co. et al	39,355.19		39,355.19
8. Lincoln Corp.			
Kemmerer Coal Co	22,854.73		
Consol-Kemmerer	9,372.97		
Gunn Quealy	1,751.54		
Total	33,979.24		33,979.24
9. Westmoreland Resources		30,876	30,876
10. Shell Oil Co		30,248	30,248
11. Gulf Oil Corp.:			
Gulf	2,560.00		
Pittsburg & Midway	6,871.72	13,237	
Total	9,431.72		22,668.72
12. Sun Oil Co.:			
Sun			
Colorado Mining Co			
Total	21,239.97		21,239.97
13. Bass	20,700.71		20,700.71
14. Amax:			
Amax		14,237	
Meadowlark Farms	5,960.31		20,197.31
15. ARCO	19,185.98		19,185.98
Total	429,871.83	260,646	690,517.83

Source: H.Rpt. 94-681, 94th Cong., 1st sess. (1975), at 16

Does Section 3 Apply to Issuance of All Onshore Mineral Leases?

By its plain language, section 3 forbids the issuance of *any* lease under the MLA for coal, oil, gas, oil shale, gilsonite and the fertilizer minerals (sodium, phosphate, potassium, and sulfur). The legislative history is vague on section 3's applicability to other minerals, but it does not contradict this interpretation of the plain meaning of the statutory language. The report and floor debate say only that the nonproducing leaseholder and any affiliates shall not be issued "leases" -- The term leases is not modified by the word "coal" as in this discussion in the section by section analysis of the house report:

> This amendment would bar the issuance of new leases to any individual or corporations that have held a lease for a period of 15 years, beginning on the date of enactment of the Federal Coal Leasing Amendments (Act of 1975, without producing coal therefrom.[8]

Elsewhere in discussing how FCLAA would address the problem of speculation in Federal coal lands the report says:

> The problems of speculation are addressed directly by H.R. 6721, which requires termination of any lease which is not producing in commercial quantities at the end of 15 years. Old leases (those existing on the date of enactment of the 1975 Act) would be exempt from this provision, except to the extent it might be made applicable upon readjustment of lease terms, *but the lessees would be prohibited from acquiring any new Federal leases should they continue to hold old leases 15 years after enactment without therefrom.*[9]

The concept of stimulating development of existing Federal coal leases by restricting the availability of new leases to lessees who did not produce coal from the leases they already had was advanced in the March 1975 testimony by the National Rural Electric Cooperative Association.[10] Their original proposal would have immediately prohibited the holding, owning, taking, or controlling or issuance of new leases to any lessee and related entities that already had "an economically developable lease or leases" and was "not producing coal from such deposits in substantial quantities or where the entity does not establish, to the satisfaction of the Secretary, that reasonable, but not speculative, assurances exist that coal will be produced in substantial quantities from such deposits within the following 5 years, or such longer time as established by the Secretary for good cause shown."[11]

A similar, but not as stringent approach, was adopted in H.R. 6721, introduced May 6, 1975:

> No person...shall take, hold, own, or control any lease issued by the Secretary under the terms of this Act, nor shall the Secretary issue a lease or

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[8] H. Rpt. 94-681, at 22. Note: FCLAA was amended on the house floor to cut the production period for compliance with the section 7 diligence provision and section 3 from 15 to 10 years, as had been recommended by the Subcommittee on Mines and Mining.

[9] H. Rpt. 94-681, at 15, emphasis added.

[10] Statement of David B. Graham, National Rural Electric Association in Hearings on H.R. 3265 (Federal Coal Leasing) Before the Subcommittee on Mines and Mining of the House Committee on Interior and Insular Affairs, 99th Cong., 1st sess. (1975), at 128, 133. Western Fuels Association, Inc., and the American Public Power Association also endorsed the proposal.

[11] Id.

> leases to any such person.. where such entity holds a lease or leases issued by the United States to coal deposits and has held such lease or leases for a period of ten or more years when such entity is not, except as provided for in section 7(b) of this Act, producing coal from the lease deposits in commercial quantities.[12]

The provision was modified by the full Interior Committee to apply to the issuance of "new leases under the terms of this act" after a coal lease had been held from 15 years and further gave lessees an additional 15 year period to comply before the sanction would be imposed, by excluding all periods of time before passage of the act. Section 3 was later amended on the floor to cut the holding period to ten years to make it compatible with time given under the 1976 diligence regulations.

The FCLAA clearly states that references to "this Act" are to be interpreted as amending the MLA. Section 3 refers to leases issued under the terms of "this Act" and not to either coal leases or leases issued under section 2 of the MLA which would limit the provision to coal only. Other provisions of the MLA were modified by FCLAA by virtue of the "this Act" provision and another interpretation would make these provisions puzzling. Section 3 may be arguably misplaced as a generally applicable restriction. It might have been enacted as an amendment to the general MLA provisions on other lease qualifications, such as U.S. citizenship.[13] The full impact of section 3 on other mineral leases did not escape the notice of the Interior Department in its comments on the earlier, more extensive version of section 3 in H.R. 6721, the proposed legislation. In a letter to the House Interior Committee which is reprinted in the House Report on FCLAA, Jack Horton the Assistant Secretary of the Interior observes:

> Section 3 of H.R. 6721 would amend the last sentence of section 2(a) of the Mineral Leasing Act to prevent any person who holds or has held for 10 years a Federal coal lease which is not producing in commercial quantities, from taking, holding, owning or controlling any lease under this Act, and would prohibit the Secretary from issuing a lease to such person.
>
> This section should be deleted. Although we favor early production, there can be valid reasons for holding reserves under a Federal lease for more than 10 years without development. This is particularly true if the lease is part of a logical mining unit which is being developed. Lead time for power plants is now generally approaching 10 years; in many cases it now exceeds 10 years. The start-up period for a new mine may be as long as 5 to 7 years. This provision might force an uneconomic and perhaps more environmentally costly technique of mining in order to avoid the limitation it would impose.
>
> It should also be noted that the penalty for not producing within 10 years would not only be cancellation of the lease, but cancellation of any other lease issued under the Mineral Leasing Act that the person, association, or corporation holds. We recommend that this unusually onerous subsection be deleted from the bill.[14]

Partially in response to the Department's objection, the Committee dropped that portion of proposed section 3 that would have barred any lessee from the continuing to take or hold leases issued under the MLA, but kept the language barring issuance of new leases. The inclusion of this letter in the Committee's report adds further explanation to how the provisions were interpreted at the time of enactment.

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[12] H.R. 6721, sec. 3, 94th Cong., 1st sess. (1975).

[13] See, for example, 30 U.S.C.181, 184, and 187.

[14] H. Rpt. 94-681, at 38.

Despite the very strong indications that section 3 applies to and was intended to apply to all onshore mineral leases, this view is not universally held. (Conoco, one of the major Federal coal leaseholders, is currently seeking a declaratory judgment from the Federal district court in Delaware that section 3 does not in fact apply to leases for other minerals).[15] The argument that section 3 should be interpreted as applying to coal only generally makes the following points.

> 1. The prohibition appears in a section of the MLA dealing with coal leasing detailing preconditions to issuance of a Federal coal lease. This might be interpreted as suggesting that the disqualification applied only to coal leases. If it were intended to apply to all MLA leases, the argument goes, Congress might have amended the MLA provisions that are generally applicable to all leases rather than placing the provision in sections applicable primarily to coal leases.
>
> 2. The use of the term "new leases" in the legislative history might be construed as referring only to coal leases in that context since the term is frequently preceded by discussions of coal leases.
>
> 3. The "contemporaneous interpretation" by the Department of the Interior in modifying its regulations for coal leases to incorporate provisions of FCLAA in January 1977 included the section 3 restriction only in the new coal leasing regulations.[16] Current coal leasing regulations contain the section 3 disqualification provision, but other mineral leasing regulations do not include section 3 restrictions in their lease qualifications provisions.

In addition to the points of statutory construction argued above. Several policy objections are also generally advanced. (1) It is unfair to penalize oil and gas operations for the failures of a lessee, (or its subsidiaries of affiliates) in the operation of its coal lease(s) over which the oil and gas operations may have no control. (2) Enforcement of the provision will be too complex, burdensome, and or disruptive to the coal program and other mineral leasing activities. (3) Enforcement of the provision will have "disastrous", far reaching, and unintended impacts on noncoal leasing areas, particularly oil and gas. (4) The revenue impacts from the disqualification of section 3 leaseholders and affiliated entities would be significant and undesirable. (5) Section 3 creates an unfair enforcement scheme since not all lessees are placed under the same risks for nonproduction.

OTA concludes, however, on the basis of the explicit language of FCLAA and the concerns expressed in congressional history that section 3 does indeed restrict the issuance of all Federal onshore mineral leases to leaseholders not in compliance with the section 3. We note that the Department of the Interior has reached a similar conclusion in the February 1985 Solicitor's Memorandum. M-36951.[17]

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[15] Conoco, Inc. v. Hodel, Civil No. 85-27 (D.Del, filed May 10, 1985).

[16] See 42 Fed. Reg. 4,454, Jan. 25, 1977 and 43 C.F.R. 3525.1(f) (1977).

[17] Solicitor's Memorandum M-36951 to the Assistant Secretary for Land and Minerals Management on Section 2 (a)(2)(A) of the Mineral Leasing Act of 1920, Feb. 12, 1985.

WHAT DOES SECTION 3 DO?

Section 3 is independent of any other coal lease diligence provision and its applicability is not contingent on lease readjustment or the issuance of regulations or guidelines. The only precondition for a section 3 penalty is that a lessee has held a lease for ten or more years after August 4, 1976 and the lease is not producing in commercial quantities and is not subject to one or more limited exceptions to the production requirement. Section 3 was primarily aimed at nonproducing pre-FCLAA leases. But it can, in come circumstances, apply to nonproducing post-FCLAA leases and thus provide an additional, and nondiscretionary production forcing mechanism that backs up the diligence provisions of the MLA and regulations. Compliance with other lease diligence provisions is not, however, sufficient to satisfy the section 3 producing in commercial quantities requirement.

As a qualification provision section 3 is similar to other eligibility requirements under the MLA such as U.S. citizenship, limitations on the total acreage holdings, and the Section 2(c) restriction on railroad leaseholding.[18]

Section 3 penalties affect lessees, not leases. A single noncomplying lease will invoke the disqualification. The section 3 disqualification attaches to a lessee (and related entities) as long as the lease is in noncompliance. The disqualification is lifted if the lease is brought into production, assigned to an unaffiliated party, relinquished, suspended, or advance royalties are paid in lieu of continued operation under section 7(b) of FCLAA. The 10-year holding period for section 3 compliance is restarted when a noncomplying lease is assigned to an unaffiliated party.

Section 3 does not raise any constitutional issues involving the alteration or taking of rights under existing leases because it does not affect the terms or conditions of existing leases. Section 3 restricts the actions of the Secretary of the Interior in managing Federal lands. Ownership of a Federal coal lease conveys no "right" to acquire additional Federal coal leases. The Constitution vests in the Congress extremely broad authority over the management disposition of the Federal lands and Congress may set virtually whatever conditions it wishes on their use. Congress might legally, if it so chooses, amend section 3 to eliminate the ten-year holding period and to provide that the Secretary may not issue a lease to anyone who holds a Federal coal lease that is not producing in commercial quantities.

The reach of the section 3 disqualification is extensive and bars the **issuance** of new leases for coal and for all other minerals leased under the terms of the MLA on public lands and on acquired lands. The minerals covered include **onshore** deposits of "coal, phosphate, sodium, potassium, oil, oil shale, gilsonite (including all vein-type solid hydrocarbons), or gas". OTA interprets lease **issuance** as the creation of a new lease by the Secretary that grants mineral development rights in lands that are not already subject to a lease for that mineral.

Lease Transactions Not Subject to Section 3

The ban on issuance of new leases to noncomplying parties does not foreclose all means of acquiring Federal coal, however. Section 3 does not prevent:

- lease assignments (the transfer of a Federal lease between private parties after issuance);
- modifications (the expansion of a lease to include unleased Federal land - limited by statute to 160 additional acres for most coal leases);

---

[18] See 30 U.S.C. 181, 184, and 202.

o lease segregations (the transfer of land under an existing lease by subdivision into two or more separate leases bearing the same terms, conditions, and effective date as the original lease); or

o lease consolidations (the merger of leased lands from one or more existing leases into a single existing lease).

These lease transactions thus remain available to the Department and to a noncomplying lessee as means of acquiring additional Federal minerals and/or as a means of reconfiguring a lease to comply with section 3.

Preference Right Lease Applications (PRLAs)

Because of the plain meaning of the language "the Secretary shall not issue any lease," OTA concludes that section 3 bars the issuance of coal leases to preference right lease applicants who are not in compliance with the section 3 producing in commercial quantities requirement. (This is consistent with the effect of other eligibility provisions that would stop issuance of a PRLA in excess of acreage limitations or to a U.S. company controlled by foreign nationals from a non-reciprocal country.) Section 3 was not enacted "subject to valid existing rights as were some other sections of FCLAA. Addition of a savings clause would have exempted PRLAs as did other sections of FCLAA. Although it might be argued that Congress did not anticipate that processing of some 172 pending PRLAs arising from prospecting permits issued in the late 1960s and early 1970s would still be continuing in 1986, the statute does not allow exception. By similar reasoning, OTA concludes that section 3 also prohibits the issuance of preference right leases for fertilizer minerals to applicants who are not in compliance.

Leases on Acquired Lands

Section 3 clearly applies to leasing of public domain lands, but does it restrict the leasing of Minerals on acquired lands (those lands or mineral interests acquired by the United States from private owners through purchase, condemnation, or gift, for example)? Leasing of acquired lands is authorized by the Mineral Leasing Act for Acquired Lands, Chapter 7 of Title 30.[19] It can be argued that section 3 does not apply to acquired lands since such lands are not leased under the authority of Chapter 3A, however, section 3 applies to "any lease under the terms of" this chapter. The Mineral Leasing Act for Acquired Lands provides that minerals on acquired lands may be leased by the Secretary "**under the same conditions as contained in the leasing provisions of the mineral leasing laws**" (subject only to requirements that the surface management agency must consent to the lease and may specify conditions that will insure that the lands can continue to be used for the primary purpose for which they have been acquired or administered).[20]

Moreover, section 3 authorizes the Secretary to prescribe rules and regulations necessary to carry out the purposes of acquired lands leasing and further provides that such "**rules and regulations shall be the same as those prescribed under the mineral leaseing laws to the extent that they are applicable.**" It appears therefore that acquired lands leases are leases under the terms of the Mineral Leasing Act and subject to section 3. In the administration of the coal leasing program and its regulations, there is virtually no distinction drawn between public domain and acquired lands, and thus section 3 might be extended administratively to acquired land leasing as well even if it were not required by FCLAA.

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[19] **30 U.S.C. 351 et seq.**

[20] **See 30 U.S.C. 352.**

WHAT IS PRODUCING IN COMMERCIAL QUANTITIES?

FCLAA does not define "commercial quantities." Moreover, the legislative history is not explicit in defining what is commercial quantities or how it should be determined for purposes of section 3. By regulation, commercial quantities is currently defined as 1 percent of the recoverable of lease or LMU reserves.[21]

The term "commercial quantities" is used several places in FCLAA and has been a term of art in Federal mineral law. Section 6 of FCLAA (section 7(a) of the MLA) provides: "Each lease shall be for a term of 20 years and for so long thereafter as coal is produced annually in commercial quantities from that lease. Any lease that is not producing in commercial quantities at the end of 10 years shall be terminated."[22] The new Federal coal exploration program established by of FCLAA, is to be designed for "determining whether commercial quantities of coal are present, in Federal lands."[23] It appears that FCLAA left the definition of commercial quantities to the Secretary's discretion. That discretion is, however, not unbounded and is tempered somewhat by the historical use of the term in Federal mineral law.

Section 2 of the MLA originally provided that a prospector who demonstrated the discovery of coal in commercial quantities was entitled to a preference right lease.[24] This authority was repealed by FCLAA subject to valid existing rights.[25] Under the preference right leasing system, commercial quantities is defined using a "prudent man" or "marketability" test that includes an reasonable expectation that mining of the property will be profitable.[26]

In correspondence with the House Interior Committee, the DOI recommended modifying language in the proposed bill that required production in "paying quantities" under section 7(a) to "quantities which, in the judgment of the Secretary, would justify the continued operation of the mine or mines."[27] Thereafter the term "paying quantities" was changed by the Committee to "commercial quantities" without explanation. Both commercial quantities and paying quantities as used in mineral leasing law suggest operations that are profitable or give rise to a reasonable expectation that they will be profitable in the future such that a "prudent" man would be justified in continuing operation of the project.

There is no requirement or suggestion in the FCLAA that commercial quantities be defined the same in section 3 and section 6. The language in section 3 easily lends itself to several interpretations. The Interior Solicitor's Opinion M-36951 offered four possible ways of defining "producing in commercial quantities":

> There are several lawful ways to implement the term: (1) as the term is used in oil and gas law to describe a rate of production from a solid mineral mine

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[21] See 43 C.F.R. 3472.1-2(e) and 3480.0-5(a)(6) (1985).

[22] Public Law 94-377, sec. 6, 90 Stat. 1087 (1976); 30 U.S.C. 207(a).

[23] Public Law 94-377, sec. 7, 90 Stat. 1087 (1976); 30 U.S.C. 208-1.

[24] Act of Feb. 25, 1920, ch. 85, sec. 2, 43 Stat. 438.

[25] Public Law 94-377, sec. 4, 90 Stat.1085 (1976).

[26] See 43 C.F.R. 3430.1-2 (1985). The regulation defines commercial quantities as "The coal deposit discovered under the prospecting permit shall be of such character that a prudent person would be justified in further expenditure of his labor and means with a reasonable prospect of success in developing a valuable mine. Further, the applicant must demonstrate that "there is a reasonable expectation that revenues from the sale of the coal shall exceed the cost of developing the mine and extracting, removing, transporting, and marketing the coal."

[27] See H. Rpt. 94-681 at 33.

> meeting reasonable commercial standards; (2) as the term is used in regulations defining "continued operation" on a Federal coal lease, as a rate (an amount over a short period like 1 year) of sustained production; (3) as the term is used in the regulations defining "diligent development" on a Federal coal lease, as a cumulative amount (over a longer, fixed period, taking into account start up time and initial mine production) of initial production, with a succeeding rate thereafter; or (4) by some combination of the foregoing.[28]

OTA concludes that at a minimum section 3 requires actual production of coal in commercial quantities of coal before or at the time a new lease is issued. Section 3 does not define the period over which the production is to be measured. The Secretary was left to interpret both "producing" and "commercial quantities."

By regulation, the Department has established production of 1 percent of the recoverable reserves of a lease or of the approved logical mining unit (LMU) containing the lease as "commercial quantities" for both section 3 and the diligent development and continuous operations requirements of section 6 of FCLAA.[29] The production periods are different for each however. For diligent development purposes a lessee must produce 1 percent of lease recoverable reserves within 10 years of lease issuance or readjustment. Continued operations requires an average annual production rate of 1 percent of lease reserves after satisfying the diligent development requirement.

OTA concludes that the term "commercial quantities" is a term of art in Federal mineral law and need not be defined as production of a fixed amount of recoverable reserves for purposes of sections 3 or diligence requirements of FCLAA. OTA believes that as long as a lessee is actually producing or has produced coal after August 4, 1976, FCLAA allows the Secretary to consider other factors in determining whether the amount of coal produced is commercial quantities for the purposes of these provisions or whether the amount produced is merely "frivolous." Examples of such other factors include: the eventual capacity of the mine; the amount of reserves, and geological and engineering restraints on the rate of initial production; the demonstrated investment in mine construction and facilities; and the schedule for production and delivery of coal under a long term contract. The term "producing" implies some continuity of activity, however OTA believes that section 3 does not impose an additional annual or continued operation obligation on the lessee. Intermittent or sporadic production from an ongoing commercial mining operation could be sufficient for compliance with section 3, even if the mine is temporarily idled. We do not however, conclude that production restarts the 10 year section 3 "clock." **The Secretary has virtually no discretion under FCLAA to find compliance with section 3 in cases where there is not any production from the lease after 1976.**

Are there any difficulties or uncertainties in the determination of commercial quantities under DOI regulations and guidelines? If a lease has an approved mine plan and is permitted, there is ample information on which to base a commercial quantities determination of reserves for the area that is being mined. This information is adequate for DOI and the lessee to estimate reserves with an acceptable degree of certainty. If the lease has very large reserves that are not currently proposed to be mined and for which there is less information available, it is possible that the lessee and the Department might disagree over the reserve base for commercial quantities. The lessee may, however, be able to demonstrate to the satisfaction of the Department that portions of the deposit are not, in fact, economically recoverable according to the approved plan of operations. The Department could then reduce the commercial quantities amount. If the Department disagreed, the lessee might relinquish sufficient reserves to reduce the base, or, alternatively, appeal the Departments action.

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[28] Solicitor's Memorandum M-36951 to the Assistant Secretary for Land and Minerals Management on Section 2(a)(2)(A) of the Mineral Leasing Act of 1920, Feb.12, 1985, at 1.

[29] 43 C.F.R. 3480.9 5(a)(6) and discussion in preamble of 1982 regulations, 47 Fed. Reg. 33,157, July 30, 1982.

HOW HAS THE DEPARTMENT OF THE INTERIOR PREPARED TO IMPLEMENT SECTION 3?

Since passage of FCLAA, the Department has thrice issued several regulations defining section 3 production obligations.

In January 1977, final regulations were adopted that made compliance with section 3 a qualifications requirement for Federal coal leases. Under the 1977 regulation, production of coal in commercial quantities was "production adequate to meet the requirement for continuous operation", which at the time required production at an average annual rate of one percent per year.[30] The provision was consistent with the 1976 diligence regulations that required all existing leases to produce 2.5 percent of reserves by June 1, 1986 and 1 percent of reserves annually thereafter. Exceptions were allowed for operations disrupted by strikes, the elements, and casualties not attributable to the lessee, and when production was suspended by the Secretary on payment of advance royalties.

In July 1979 regulations were promulgated that created a substantially revised Federal Coal Management Program. Compliance with section 3 was continued as a qualifications requirement for obtaining Federal coal leases.[31] The regulations provided that:

> After August 4, 1986, no lease shall be issued to any applicant or bidder that holds and has held for 10 years any lease from which coal is not being produced, except as authorized under section 3475.4 of this title, in commercial quantities as defined in 3400.0-5(i)(1) of this title.[32]

At the time there was no mention of the provision in preamble to the final regulations. (The provision did not appear in the March 1979 proposed regulations, which were said in the preamble to restate current regulations adopted in 1976.) Commercial quantities, however, was defined as production of an amount equal to one fortieth of lease or LMU reserves, an apparent, but perhaps inadvertent increase over the 1977 requirement. The exceptions refer to the provisions for diligent development and continued operations under the 1976 diligence regulations and do not directly track the language of sections 3 and 6 of FCLAA. The 1979 regulations would seem to allow payment of an advance royalty in lieu of continued operations with approval of the mining supervisor as an exception to section 3. This options was not limited to leases readjusted after FCLAA. Advance royalties for pre-FCLAA leases were to be based on a percentage of the value for a minimum number of tons of coal. "The percentage is not to be less than that prescribed in the lease." For pre-FCLAA leases, "the minimum number of tons shall be determined on a schedule sufficient to exhaust the leased reserves in 40 years from June 1, 1976" or an average of 2.5 percent annually. (This production rate was similar to that required under the 1976 diligence regulations that were continued under the 1979 coal management program.) These regulations suggest that these payment obligations would be undertaken voluntarily by the lessee. The regulations also suggested that discretionary extensions of the 10 year diligent production period for pre-FCLAA lessees might also be an exception from the producing in commercial quantities requirement of section 3.

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[30] See 42 Fed. Reg. 4,454, Jan. 25, 1977; 43 C.F.R. 3525.1(f) (1977).

[31] 44 Fed. Reg. 42,645, July 19, 1979; 43 C.F.R. 3472.1-1(e) (1985).

[32] Id.

In July 1982 the Department changed the qualifications provisions as part of yet another overhaul of coal leasing regulations. The regulations establishing the qualifications of coal lessees and bidders currently provide:

> After August 4, 1986, no lease shall be issued to any applicant or bidder and no existing lease shall be transferred to any party that holds and has held for 10 years any lease from which coal is not being produced, except as authorized under the advance royalty payment provisions of 43 CFR Part 3480, in commercial quantities as that term is defined in 43 CFR Part 3480.[33]

The provisions amended the 1979 qualifications regulations by adding a restriction on lease assignment, limiting the availability of exceptions, and reducing the commercial quantities production from 2.5 percent to 1 percent of lease reserves.

The 1982 regulations limited the exceptions for payment of advance royalties under section 3480. Minimum production payments paid under any lease issued before August 4, 1976 and not readjusted are not considered to be advance royalties under section 7(b) of the MLA for purposes of section 3. When compared with the 1976 and 1979 provisions, the 1982 regulations in many ways tightened up the qualifications provision and limited the options available to a lessee and to the Department in determining compliance with section 3. The rulemaking again had little discussion of the section 3 provisions, except to note that no determination had been made about the applicability of section 3 qualifications requirement to other minerals.

In response to inquiries by coal lessees and the absence of congressional action on repeal of section 3, the Department issued proposed guidelines on section 3 on the related matter of LMU formation in Spring 1985. The proposed guidelines were published for public comment; final guidelines were published in August 1985.

OTA has found that the Department's section 3 guidelines and related regulations are, in some respects, more stringent than required by FCLAA, and in other respects, border on accepting very small amounts of production as commercial quantities for compliance with section 3.

By regulation, the Department has extended the section 3 production requirement to the qualifications for approval of lease assignments. This is not required by FCLAA. In fact, the original version of section 3 included language that would also have prevented a noncomplying lessee and related entities from acquiring a lease by assignment or other means, and might have required divestiture of other leases. This language was dropped by the Committee on the advice of the Department in favor of the current provision restricting only lease issuance.

The 1976, 1979 and 1982 coal leasing regulations each restricted the Secretary's discretion in applying section 3 and created compliance difficulties for some newly opened mines by defining "commercial quantities" for section 3 purposes as an inflexible, fixed amount in the absence of, any guidelines explicitly interpreting section 3. The section 3 guidelines may partially overcome the impact of the regulations through the flexible interpretations of "producing" and the period over which commercial production must be measured.

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[33] 43 C.F.R. 3472.1-2(e)(1985).

SECTION 3 GUIDELINES

The Department has issued guidelines describing current plans to administer section 3 for Federal coal leases. The guidelines are intended to assist Bureau of Land Management (BLM) field staff in determining compliance and to answer these questions: When is a lease subject to the section 3 producing in commercial quantities requirement? What is commercial quantities? When must that production have occurred? What are the recoverable coal reserves for the purposes of section 3? What can a lessee do to satisfy the requirement? What is an affiliate of the lessee under section 3?

The draft guidelines on section 3 were published for public review and comment in February 1985,[34] followed by draft guidelines on LMU formation in April 1985.[35] After review of the comments, final section 3 and LMU guidelines were published on August 29, 1985.[36] Because the guidelines were not promulgated as regulations, there was no requirement that the Department publish either the proposed or the final guidelines or respond to public comments. In publishing the final guidelines, the Department noted that the guidelines are meant to serve solely as an aid to BLM field offices in determining section 3 compliance within the discretion allowed to them under existing rules and consistent with the policy statements contained in the guidelines.[37] These "internal" guidelines and policies can be changed without advance public notice or publication. As guidelines, they may not be as judicially reviewable or enforceable as regulations. The guidelines offer little assurance to lessees that the current interpretations will be binding on the Department in the future or given deference by the courts should section 3 decisions be challenged in litigation. Representatives of the coal industry and environmentalists testified at June 1985 hearings of the House Subcommittee on Mining and Natural Resources on the unreliability of guidelines as regulatory tools and their preference for regulations.

The Department has considerably limited its discretion in implementing section 3 by regulations defining commercial quantities for section 3 purposes as production of 1 percent of lease or LMU reserves. The guidelines note the difficulties that may have been created by this and other provisions in the 1982 rules changes and note that they will be examined during a planned regulatory review of the coal management program.[38] The guidelines nevertheless attempt to create some flexibility within the constraints imposed by the current regulations through the interpretation of "producing" and in setting the time frame over which production of commercial quantities is measured.

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[34] 50 Fed. Reg. 6,398, Feb. 15, 1985.

[35] 50 Fed. Reg. 14,303, Apr. 11, 1985.

[36] 50 Fed. Reg. 35,125, Aug. 29, 1985.

[37] 50 Fed. Reg. 35,137, Aug. 29, 1985.

[38] The BLM solicited comments on alternative definitions of producing in commercial quantities when it published the draft guidelines in February. The alternative measures of producing in commercial quantities include:

(i) requiring that the lease be producing and that 1 percent of reserves must have been mined before lease qualifications are determined, without regard to when they production occurred (an approach similar to the diligent development requirement);

(ii) requiring production of 1 percent of reserves in the year before lease qualifications are determined (making it similar to the continuous operations obligation); and

(iii) defining commercial production as production under a coal sales contract, or production at a rate that operating revenues exceed operating costs exclusive of capital investment (terms that are similar to the producing in paying quantities obligations of oil and gas leases).

See 50 Fed. Reg. 6,399, Feb. 15, 1985. Adoption of any of these alternative definitions would require a change in regulations.

In determining compliance the field office must first ascertain whether the lease has been held for 10 years after August 4, 1986. If it has not been held for a total of ten or more years, section 3 does not apply. If the lease has been held for 10 or more years, the BLM must determine whether the lease is producing, or is part of an LMU that is producing. If the lease or LMU is not producing and not subject to an exception, the lessee and all affiliated firms are disqualified. If the lease or LMU is producing, the guidelines will assist the BLM field offices in deciding whether the amount of production is sufficient to satisfy the producing in commercial quantities requirement.

The MLA and regulations set production time frames of 10 years for diligent development and one year for continuous operations.[39] However, neither section 3 nor existing rules specify a time period for measuring production of commercial quantities. The guidelines adopt the view that "producing" in section 3 implies a continuing obligation on the part of the lessee. The guidelines therefore require at least some production at the time that Federal lease qualifications are being determined, but how much production is necessary depends on the particular characteristics of the mining operation and whether or not the lease has been made subject to the 1982 regulatory diligence system.

Lease qualifications are established by the lessee's compliance status at the time the new lease is sought. If the old coal lease later goes out of production, the new lease is not revoked.

BLM will determine an appropriate production bracket for each lease to measure producing in commercial quantities. The maximum production period allowed under the guidelines is 10 years; most production brackets will be less than 10 years. For the majority of pre-FCLAA Federal coal leases the production bracket could begin as early as the date that production begins after August 4, 1976, but not more than 10 years before the date that lease qualifications are determined. Production before 1976 cannot be credited. The production bracket is independent of the section 3 10-year holding period. The production bracket can extend beyond the time when lease qualifications are reviewed and projected production can be used in determining compliance.

The guidelines interpret "producing in commercial quantities" differently for 3 categories of producing leases depending on whether a lease has been made subject to the 1982 diligence rules and other requirements of FCLAA. Production brackets, commercial quantities amounts, and determination of recoverable reserves are different for each category. No distinctions are made for nonproducing leases that are not under one of the section 3 exceptions.

Category 1: Producing leases that are subject to the 1982 diligence "system".

Category 1 includes all leases issued since enactment of FCLAA and all pre-FCLAA leases that have been amended to include the requirements of the 1982 regulatory diligence system. According to the guidelines, there are five ways that pre-FCLAA leases come under the 1982 diligence system.

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[39] 43 C.F.R. 3472.1-2(3) (1985).

1. Readjustment of a pre-FCLAA lease after August 4, 1976 to make it subject to the 1982 diligence provisions.[40]
2. Modification of a pre-FCLAA lease to add new acreage after August 4, 1976.[41]
3. Voluntary amendment of lease terms to include specific diligent development terms in response to BLM request during 1980.[42]
4. BLM approval of the voluntary amendment of lease terms to be include the 1982 diligence provisions in lieu of lease specific diligence provisions in response to a lessee's request filed between August 1982 and August 1983.[43]
5. Amendment of a pre-FCLAA lease to include the 1982 diligence requirements on approval of LMU formation.[44]

Any production after a lease is subject to the diligence system is credited toward achieving the diligent development requirement and once that is satisfied, production is credited to meeting the annual continuous operation requirement. (In some circumstances, any production after August 4, 1976 may be credited toward diligence obligations at the lessee's request).

The relevant production bracket for measuring commercial quantities is the 10 year diligent development period for leases that have not yet produced 1 percent of reserves under the 1982 diligence system. For these leases, the Authorized Officer will determine whether coal is being mined at a rate that will result in satisfaction of the 1 percent diligent development obligation at the end of 10 years.[45] The lease must actually be in production at the time the lease qualifications are being determined in order to comply with section 3. If the lease is not producing, it is not in compliance with section 3, even though it may be fully in compliance with any diligence obligations. The lessee may actually have produced considerably less than 1 percent of lease reserves on a lease held for 10 or more years when a new lease is sought. Future production expectations are credited toward the 1 percent commercial quantities amount if the lease has not yet achieved diligence. If the lessee subsequently fails to produce commercial quantities on the old lease, the new lease will not be revoked.

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[40] Pre-FCLAA leases were originally "subject to" readjustment every 20 years. FCLAA shortened the readjustment periods for leases to every 10 years after expiration of the initial 20-year term. Pre-FCLAA leases can be readjusted at the end of their current 20-year pre-FCLAA term and every ten years thereafter. The MLA and regulations do not require that leases actually be readjusted, however it is and has been Department policy to do so. See discussion elsewhere in this report of recent problems with ineffective lease readjustments by BLM. Some leases that missed readjustment after Aug. 4, 1976 will not become subject to the 1982 diligence system until their next lease readjustment. The issue of how a lease actually readjusted between Aug. 4, 1976 and Aug. 30, 1982 when the current rules took effect is an interesting one. One ostensible reason that the diligence rules were changed in 1982 is that the Solicitor's opinion suggested that production obligations could not be altered except on readjustment. But the 1982 rules attempt to rewrite diligence terms for leases that had already been readjusted to contain the more stringent terms of the 1976 regulations.

[41] The Department has required lessees to consent to amendment of lease terms to include revised diligent development terms as a condition of lease modifications.

[42] BLM sent notices to many lessees in 1980 advising them of the requirements of the 1976 and 1979 diligence requirements and asking them to sign and return a lease amendment form that required compliance with the rules. Some lessees complied. Other lessees objected and the Department dropped its efforts to have leases specifically amended to include the new terms.

[43] BLM required lessees to file an election with the BLM to take advantage of the provision and to gain credit for post-1976 production for diligence purposes. See 43 C.F.R. 3483.1(b)(1) (1985). Conditional elections were filed on about 30 leases by the August 1983 deadline, but approvals have been delayed pending clarification of section 3 requirements. Personal communication from BLM to OTA, May 1985.

[44] BLM rules require that LMUs comply with the 1982 diligence requirements. See discussion of diligence obligations and LMUs later in this chapter.

[45] The "Authorized Officer" is defined as "any employee of the Bureau of Land Management delegated the authority to perform the duty described in the section in which the term is used." See 43 C.F.R. 3400.0-5(b) (1985).

Once the diligent development requirement has been met, the relevant commercial quantities production bracket is the continuous operations year. Compliance with section 3 requires that in the judgment of the authorized officer the lease is producing at an average annual rate of 1 percent of reserves based on a three year average. A lessee may pay advance royalties in lieu of actual production to comply with the section 7(b) continuous operations requirement. Payment of advance royalties also suspends the section 3 production requirement for that year.

The amount of recoverable reserves on which commercial quantities is calculated is the amount of reserves as of date the lease became subject to the 1982 diligence system. Under the 1982 regulations, the original recoverable reserves base does not decline with production for purposes of determining compliance with section 3 and diligence obligations. (The reserves estimates can be modified to reflect new information or changed conditions however.) The guidelines suggest that the regulations create a situation where a lessee might be required to pay advance royalties to satisfy the continuous operations and section 3 requirements for a category 1 lease that has been mined out and is under reclamation with no prospect of recouping the payments out of future production royalties on the lease.

The 10-year production bracket over which section 3 compliance is measured begins for category 1 leases on the date the lease became subject to the 1982 diligence system and may extend after the date on which new lease qualifications are determined. Once diligent development has been met, the 10-year bracket is not relevant, the lease must either be producing an average of 1 percent annually or paying advance royalties.

Category 2: Producing pre-FCLAA leases not yet subject to the 1982 diligence system

Most pre-FCLAA leases will initially be Category 2 leases not subject to the 1982 diligence system because most scheduled readjustment dates for pre-FCLAA leases are in the late 1980s early 1990s. The guidelines largely leave the determination of how much production is actually necessary and when it must occur to the discretion of the Authorized Officer taking into consideration the characteristics of the mine. For these leases, producing in commercial quantities means the lease is producing at a rate that will result in production of a total of 1 percent of recoverable lease reserves over an appropriate production bracket assigned by the Authorized Officer. The production bracket can be no more than 10 years. The guidelines state that " The time period should be set at less than 10 years in cases where that more closely approximates what is "commercial" given the reality of the operation."[46] The time frame may be readjusted to reflect changes in conditions. The bracket begins on the date that production started after August 4, 1976, but no more than 10 years before the date on which lease qualifications are determined if production began before 1976 or the lease has been producing for more than ten years after 1976. The production bracket can extend after the date on which a new lease is sought and projected production can be used. Commercial quantities is 1 percent of recoverable reserves existing on the date the bracket begins. The amount of recoverable reserves on which commercial quantities is calculated will decrease with production until the lease becomes subject to the 1982 diligence system and thus a category 1 lease.

The guidelines suggest that production of much less than 1 percent of reserves before the time a new lease is sought can be sufficient for compliance if the lease is producing and the BLM concludes that it will produce 1 percent of lease reserve by the end of the assigned bracket under its plan of operations. The guidelines are silent as to when and how much commercial production must occur before qualifications are determined to be considered as "producing" at that time.

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[46] 50 Fed. Reg. 35,134, Aug. 29, 1985.

This commercial quantities production rate of one percent over whatever production bracket might be assigned to the lease by the BLM is now, in practical effect, the only production requirement imposed on old leases before readjustment assuming 1) that the lessee wishes to acquire a new lease and 2) that the Department will not attempt to enforce any specific minimum production clauses in existing leases or the more general diligence obligation of the original section 7 of the MLA.

Category 3: Leases in Approved LMUs that are producing.

For Category 3 leases in an producing approved LMU producing in commercial quantities requires that the LMU production is being credited toward commercial quantities for either diligent development or continuous operations requirements of the 1982 diligence system. Section 5 of FCLAA allows production anywhere in an LMU to be used to satisfy production requirements for all Federal leases in the LMU. The Solicitor's Memorandum M-36951 concluded that the language of section 5 allows LMU production to satisfy the section 3 producing requirement. Under the 1982 diligence system, the 10-year LMU diligent production period begins on the date of LMU formation or, if there are no unadjusted pre-FCLAA leases in the LMU, on the most recent date of post-FCLAA lease issuance readjustment, modification or election. The determination of whether an LMU is producing in commercial quantities is similar to that for category 1 leases. The LMU must be currently "producing" and the production rate must be sufficient to result in satisfaction of the initial 1 percent diligent development obligation by the end of the applicable LMU diligence period or the 1 percent annual LMU continuous operations obligation. The LMU recoverable reserves are the total reserves in the LMU on the effective date of LMU approval. Leases in an LMU can also satisfy the continued operations and section 3 production requirement by paying section 7(b) advance royalties.

Impacts of the Guidelines on Section 3 Implementation

The guidelines effectively set different minimum production amounts and production "brackets" for pre-FCLAA leases depending on whether or not the 1982 diligence regulations have been made applicable to the lease and when the lease began producing. This means that some lessees have to be producing at a rate of as much as 1 percent of reserves annually to comply with section 3, while other lessees have to be producing towards a projected total of 1 percent of lease reserves over a period of up to 10 years which may extend after the time the new lease is issued. Such a scheme is neither contemplated or required by section 3, but may be within the Secretary's discretion. Alternatively, a simple rule change making the determination of producing in commercial quantities a factual judgement based on consideration of the lessees overall investment and production efforts, pattern of operations, contractual commitments, and actual production would provide the necessary flexibility while also maintaining the intent of section 3.

> The production requirement assures that no Federal lease that "meets" section 2(a)(2)(A) is being held for speculative purposes; any lease on which production (of other than frivolous amounts of coal) is occurring has seen the investment of millions of dollars of fixed, sunk, costs. Thus the Congressional intent to force production or relinquishment, in order to qualify for new Federal leases is fully satisfied.[47]

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[47] 50 Fed. Reg. 6,398, Feb. 15, 1985.

The Department's guideline approaches have a number of weaknesses and some strengths. One weakness is that defining producing in commercial quantities for one class of lessees as "producing toward" achievement of production of 1 percent of lease or LMU reserves over a period of up to 10 years after new lease issuance might be viewed as accepting frivolous amounts of production to qualify under section 3 for some lessees while requiring more significant efforts from others. Another major weakness, in the view of many lessees and others, is that the internal guidelines are an unreliable basis for corporate investment decisions because they could be changed without public notice.

Leaving the determination of the lease production bracket and whether the lessee's level of production is sufficient for commercial quantities to the discretion of field office on a lease by lease basis creates great uncertainty for lessees as to whether at some time in the future their current or past production levels will be deemed inadequate to qualify them for leases. Moreover, once a pre-FCLAA lease is readjusted or otherwise made subject to the current regulatory diligence system, the definition of producing in commercial quantities changes. The current regulations leave lessees who have depleted their currently recoverable reserves but retain their leases for reclamation, access, or LMU purposes at considerable risk of noncompliance.

Section 3 is independent of section 7, there is no requirement that commercial quantities amounts be the same for both. Many of the contortions and complexities in the guidelines are attributable to the 1982 diligence rule changes and the adoption of production of 1 percent of lease reserves as commercial quantities for both the section 7 diligence and continuous operation requirements and section 3 purposes. The linking of section 3 and section 7 production obligations and exceptions, however, reinforces the 1982 regulatory diligence system and could potentially bring many pre-FCLAA leases under its requirements voluntarily in order to comply with section 3. As a result of the voluntary lease amendments and LMU approvals, many pre-FCLAA lessees could face earlier diligence deadlines than if they waited until the leases were readjusted as scheduled. On the other hand, the guidelines may tend to undercut the potential impacts of section 3 by, in some cases, authorizing the acceptance of very small amounts of production to satisfy the section 3 commercial quantities requirement to counteract the impact of the regulations.

WHO IS SUBJECT TO SECTION 3 DISQUALIFICATION?

The section 3 nonproduction penalty is a far-reaching disqualification from acquiring new Federal onshore mineral leases that affects not only the record title holder of the lease but "any person, association, corporation, or any subsidiary, affiliate, or persons controlled by or under common control with such person, association, or corporation." The legislative history did not discuss this language specifically with regard to section 3. The language is identical to Section 11 of FCLAA amending section 27(a) of the MLA which imposes acreage limitations on total Federal leaseholdings. Because the same language was used in the same Act, the legislative history of section 11 is particularly pertinent. The section 11 amendment was made to broaden the definition of an entity to which the acreage limitation applied "to assure that the restrictions on leaseholdings are not circumvented by the formation of holding companies, or other devices of corporate organization. Henceforth no one entity, under whatever corporate or other form, will be permitted to take, hold, own or control coal leases on more than 100,000 acres in the United States or more than 46,080 acres in any one State..."[48]

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[48] H. Rpt. 94-681, at 25-26 (1975).

The Department's guidelines offer some assistance in determining how many lessees and their corporate families might be affected by section 3. However, the Department has not yet sufficiently and clearly interpreted the meaning of "affiliate" or "controlled by or under common control with" for section 3 purposes to predict how section 3 will be enforced against certain lessees and leases, particularly those that have been transferred in complex corporate acquisitions and mergers.

The February 1985 Solicitor's memorandum finds that "control is the key concept through which ownership of a nonproducing Federal coal lease will be attributed to related corporate entities."[49] The Solicitor's opinion concludes that the question of whether a particular entity is "controlled by or under common control" with another entity (for section 3 purposes) -- is an issue of fact which generally must be resolved on a case-by-case basis under established, but inexact, legal principles."

Coal leases are held in various forms: in the name of corporations, wholly-owned corporate subsidiaries, joint ventures, by two or more corporations with various percentage shares, by individuals (singly, as joint tenants, and as tenants in common), and by partnerships, associations, estates, and trustees (both for individuals and business trusts).

OTA believes that the statutory language and the Secretary's discretion are sufficient to apply the section 3 penalty to all types of leaseholding arrangements avoid evasion of Section 3. However, we note that the Department might use its discretion under this provision to narrow the applicability of section 3 to certain classes of leaseholders by defining control as ownership of 51 percent or more of the stock of a corporation or the lease. Similarly, a decision by the Department to restart the section 3 clock when a lessee is acquired by another corporation could effectively extend, by five or more years, the compliance period for several corporate lessees who control a significant share of the currently nonproducing leases.

The preamble to the final section 3 guidelines suggests how how some types of assignments and acquisitions might be handled. Any record title holders will be deemed to "hold" a lease for section 3 purposes even if it has a less than 50 percent interest in the lease. Assignments of leases between parent corporations to subsidiaries or between subsidiaries of the same corporation will not restart the section 3 holding period. If a new parent corporation gains control a lessee corporation, the new parent would be governed by the lessee's original 10-year holding period. If a lessee (or a related company) reacquires a lease that it previously held after August 4, 1976, the lease will not have a new 10-year holding period. The subsequent ownership period will be added to the prior term in determining whether a lease has been held for a total of 10 or more years.

The preamble and the Appendix C to the final guidelines reiterate that the Secretary will use "relevant, well accepted principles" in making the determination of parent - subsidiary and affiliate relationships under section 3. The issue will be decided on a case by case basis when lease qualifications are determined guided by several principles:

1. A corporation is a *subsidiary* of another corporation if more than 50 percent of the its voting securities are held directly or indirectly by the other corporation.

2. A corporation is an *affiliate* under legal control of another corporation when more than 50 percent of the voting securities of each such corporation is held directly or indirectly by another person, corporation, or entity; or

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[49] Solicitor's Opinion M-36951, at 28.

3. The Secretary may determine that in the absence of legal control through stock ownership a person, association, or corporation is under the actual control of another person, association or corporation.[50]

These above "guides" set a very high threshold for presuming control. The appendix discussion notes the possibility that smaller ownership percentages might confer control over a company. "Actual control of a corporation will often exist without ownership of a majority of the corporation's voting stock. Ownership of less than 50 percent may provide actual control where stock ownership is widely dispersed." The appendix does not suggest what circumstances or criteria might be used to indicate the existence of control by ownership of less than 50 percent of the voting stock of a corporation. For partnerships, joint-ventures, the appendix notes that BLM intends to "implement ownership/control/affiliation concepts with respect to such entities in a manner consistent with the Office of Surface Mining's rules for control-responsibility of noncorporate business entities."[51]

The preamble to the guidelines that corporate affiliations will have to be determined at the time of lease qualification and notes that this will require changes to lease certification rules for all onshore leases and the development of procedures and standards that BLM can apply generically in making these determinations. These changes to regulations and procedures have yet to be proposed.

IS SECTION 3 RELEVANT FOR POST-FCLAA LEASES?

It is clear that section 3 was aimed primarily at old leases. It can also apply to leases issued after passage of FCLAA and provides a backup and nondiscretionary production incentive for such leases. Any post-FCLAA lease not producing within 10 years after issuance is automatically terminated by operation of law under section 7 of the MLA, making Section 3 redundant as a mechanism to force a post-FCLAA lessee to start producing. However, Section 3 still could apply to a post-FCLAA coal ease once it assignments and other assignments filed in the future would swell the number of leases and lessees that face Section 3 deadlines far into the 1990s. OTA has not included pending assignments in its analysis since assignments *can* and have been withdrawn and assignments are not effective until approved by DOI.

WHAT MUST A LESSEE DO TO COMPLY WITH SECTION 3?

Section 3 of FCLAA gives a lessee 10 years from August 4, 1976 or 10 years after acquiring a lease, whichever is later, to bring a coal lease into commercial production or face disqualification. A lessee has eight options for complying with section 3 and avoiding disqualification.

1. The lessee can produce coal in commercial quantities from the lease.

Under current regulations and guidelines the amount of production necessary for commercial quantities depends on whether the lease is subject to the 1982 diligence system and whether it has satisfied the initial diligent production requirement. Compliance with section 3 may require production at a rate of as much as 1 percent of lease or LMU reserves per year if the lease is subject to the continued operations requirement of the 1982 regulations. If however, the lease is not under the 1982 diligence system or has not yet satisfied the initial 1 percent diligent production obligation, commercial quantities compliance requires that the lease be producing at a significantly lower rate that will result in production of a total of 1 percent of lease or LMU reserves over period of up to 10 years

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[50] 50 Fed. Reg. 35,144, Aug. 29, 1985.

[51] Such rules were proposed Apr. 5, 1985, 50 Fed. Reg. 13,724, but have not been issued in final form.

2. The lessee can pay advance royalties in lieu of continued operation.

Section 3 recognizes payment of section 7(b) advance royalties as an exception to the producing in commercial quantities requirement. Section 7(b) authorizes suspension of production and payment of advance royalties in lieu of continued operation if the Secretary determines that the public interest will be served.[52] The advance royalties must be "no less than the production royalty which would otherwise paid and shall be computed on a fixed reserves to production ratio." Advance royalties may only be accepted for a total of ten years during the period of any lease.

The availability of this option to pre-FCLAA leaseholders whose leases have not yet been readjusted has been cast in doubt by the February 1985 Solicitor's Opinions and the section 3 guidelines. The opinion concluded that only advance royalties paid under a lease subject to the requirements of the amended section 7(b) can be used to avoid section 3 disqualification. The provisions of the amended section 7(b) can not be applied to pre-FCLAA leases that have not yet been readjusted. The opinion cited three reasons: (i) Section 3 refers specifically to section 7(b) and not generally to payment of advance royalties; (ii) Section 7(b) did not exist before passage of FCLAA; and (iii) FCLAA significantly altered the advance royalty provisions in comparison to the advance royalty terms of existing pre-FCLAA leases. Among the significant differences in the post-FCLAA advance royalty provision was that the amount to be paid was increased significantly, is not creditable against rentals, and can be paid in lieu of production for only 10 years.

The statutory language could however support an interpretation that is not as exclusionary on or inconsistent with basic thrust of section 3. One could interpret the designation of subsection 7(b) as a nonrestrictive reference to the MLA provision authorizing advance royalties and force majeure suspensions. Pre-FCLAA leases issued under section 7 of the MLA before 1976 are also subject to the conditions of diligent development and continued operation of the mine or mines, "except when such operations" shall be interrupted by strikes the elements, or casualties not attributable to the lessee." Payment of advance royalties in lieu of production was authorized for the continued operation requirement in language similar to that used in section 7(b). The 1976 and 1979 section 3 qualifications provisions seemed to adopt this less restrictive interpretation.

An important limitation on the availability of advance royalties as a compliance mechanism under either interpretation is that both the original MLA and FCLAA only authorize payment of advance royalties in lieu of continued operation and not diligent development. The lease must be in production before advance royalties can be used to extend the lease. A producing pre-FCLAA lessee might consent to voluntary amendment of the lease to include the post-FCLAA advance royalty provision --in effect an early readjustment). This would allow advance royalties to be used to satisfy section 3. The lessee would have to pay higher royalties, but it might, in some circumstances, be preferable to forming a logical mining unit or litigating over the Department's interpretation.

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[52] 30 U.S.C. 207(b).

OTA estimates that at most only about 130 pre-FCLAA leases might qualify for this exemption initially through scheduled readjustment. As more leases are readjusted, more will qualify for the advance royalty exception. It is probable, however that not all of the first 130 leases were effectively readjusted between 1976 and 1984 because of the Department's failures to notify the lessees properly and to adjust leases in a timely manner. Many lessees have contested post-1976 lease readjustments and some have been successful in appeals to the Federal Courts and to the Interior Board of Land Appeals. Some post-1976 lease adjustments were thus reversed or nullified so that the leases continue with pre-FCLAA terms and royalty provisions. Under the Department's section 3 guidelines, these lessees will not be eligible to pay section 7(b) advance royalties to comply with section 3 unless the leases are amended.

3. The lessee might obtain a force majeure suspension under section 7(b) if the lease operations are interrupted because of strikes, the elements or casualties not attributable to the lessee.

Section 7(b) provides in pertinent part that:

> Each lease shall be subject to the conditions of diligent development and continued operation of the mine or mines, **except where operations under the lease are interrupted by strikes, the elements, or casualties not attributable to the lessee (emphasis added).**

Casualties not attributable to the lessee do not include ordinarily foreseeable risks of doing business, such as ordinary delays in acquiring permits or the lack of markets. The Department's guidelines limit section 7(b) force majeure suspensions to leases that have been readjusted or otherwise amended to include all FCLAA terms and conditions. Force majeure suspensions for unadjusted leases are still available under the prior language of section 7 which is incorporated by reference into the lease terms.

4. The lessee can assign the lease to an unrelated entity.

An assignment of a nonproducing lease to an unaffiliated party restarts the clock for the assignee and purges the assignor of its noncompliance status for that lease. A lessee may assign or all part of the lease to another. An application must be filed with the Department for approval of the transfer and must show that the new owner is qualified to hold a lease. (Transfers of other interests in the lease such a working agreements and subleases must also be approved.) Transfers take effect on the first day of the month following approval by BLM or by previous agreement, on the first day of the month of the approval.[53] An assignment does not alter any other terms or extend the time periods for diligent development and continued operations or for lease readjustment. State governors must be given reasonable notice of any lease transfer. Until the transfer is approved, the lessee remains the record title holder and can not obtain new leases if it is in noncompliance with the section 3 production requirement. Delays in approval of assignments of 6 months or more have been reported. The guidelines note that regulations and procedures will be developed to protect the priority of applications for noncompetitive leases due to delays in processing lease assignments and other transfers.

Secretary of the Interior James Watt created a further restraint on a lessee's ability to rid itself of nonproducing leases or to obtain new leases by assignments in the 1982 regulations.[54] Coal lease assignees must meet all the qualifications of a bidders or applicants, including the section 3 production requirement for a transfer to be approved. This restriction is not required by FCLAA and was a policy decision. This decision was explained as follows:

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[53] 43 C.F.R. 3453.3-3 (1985).

[54] See 43 C.F.R. 3472.1-2(e) (1985).

> The Department of the Interior does not interpret section 3 of the Federal Coal Leasing Amendments Act to prohibit lease transfers to such lessees, but the Act appears to weigh against allowing these transfers. Section 3 of the Mineral Leasing Act as amended (30 U.S.C. 184), gives the Secretary of the Interior discretion to approve or disapprove any transfer and requires his consent for assignment or sublease of leases. This authority was discussed in the July 1979 preamble to the existing regulations (44 Fed. Reg. 42602). The Secretary has decided to exercise this authority to refuse approval of a lease transfer by requiring transferees to comply with section 3 of the Federal Coal Leasing Amendments Act, that is transferees must be eligible to bid for new leases under that section in order to qualify to receive leases by transfer.
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> If such lessees are not eligible to receive new leases as a result of the provisions of section 3 of the Federal Coal Leasing Amendments Act, then it follows that these lessees should not be allowed to receive Federal coal leases by transfer. Such transfers would circumvent section 3 because a lessee not eligible for a new coal lease could purchase that lease from the person to whom it was issued by transfer. This rulemaking makes consistent the legislative policy not to put leases into the hands of persons who, after 1986, have held any nonproducing leases for more than ten years.
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> The Department of the Interior recognizes the burden placed on industry by section 3 of the Federal Coal Leasing Amendments Act, but suggests that a legislative solution is more appropriate than a rulemaking which allows circumvention of the intent of the Act.[55]

This restriction has two effects. It significantly limits the pool of potential purchasers for nonproducing leases to those lessees who are in compliance or to whom section 3 does not apply because leases have been held for less than 10 years and to individuals or companies that hold no Federal coal leases. Secondly, it prevents a noncomplying lessee from obtaining additional coal leases through the assignment mechanism either as a means of obtaining new leases that they are barred from bidding on or other old leases.

The Department's policy goes beyond what FCLAA requires. As discussed previously, an early version of section 3 would have limited assignments to noncomplying's lessees, however this expansive restriction on lease holding and acquisition was deleted and section 3 was limited to the issuance of new leases.

Regulations governing relinquishment require that an application be filed with the State BLM office.[56] The applicant must show that all accrued rentals and royalties have been paid and that all other lease obligations have been met.[57] A lessee may relinquish all or part of the lease or any bed of the coal deposit under lease. The Secretary must find that relinquishment would not impair the public interest. The preamble to the regulations noted that:

> ...there may be cases where relinquishment would not be in the public interest. It would not be in the public interest to allow manipulation of logical mining

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[55] 47 Fed. Reg. 33,130, July 30, 1982.

[56] 43 C.F.R. 3452 (1985).

[57] 43 C.F.R. 3452.1-3 (1985).

> unit diligence, high grading and failure to achieve maximum economic recovery. such practices could theoretically occur if lease relinquishments were automatically granted.[58]

There are other circumstances where relinquishment might not be found to be in the public interest, such as relinquishment of old leases with abandoned and unreclaimed mine workings. (OTA found that there are at least 47 of these leases that are currently nonproducing.) The Federal lease form commonly requires that the lessee seal openings and remove equipment and structures and restore the surface after mining has ceased. Reclamation must be complete before approval of any relinquishment. Many old, unreclaimed leases were mined before permit conditions and reclamation standards for active coal mines were imposed under the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The lease terms are probably the only affirmative obligations to clean up any surface disturbance. Although a relinquishment will be effective as of the date it is filed, it may take some time to determine whether all the lessee's obligations under the lease have been satisfied. One or more one complete growing seasons (i.e., years) may be required to demonstrate compliance with the lease terms, if for example, the surface restoration involves, for example, revegetation of disturbed areas. In the interim, since the relinquishment is not yet effective, the lessee still "holds" the lease and could be barred from obtaining new leases or assignments until the relinquishment becomes final. If the Department accelerates the relinquishment approval process without a reasonable assurance that restoration efforts will be successful, the Government might later have to pay for correction of dangerous or environmentally harmful conditions in inactive mine workings. One possible solution might be for the Department and the lessee to enter into a legally enforceable agreement obligating the lessee to restore the surface and to guarantee any expenses in return for approval of the relinquishment.

6. The lessee can obtain a suspension of the lease under section 39 of the MLA.

The Secretary can suspend operations and production on any coal lease "in the interests of conservation of the resource" under section 39.[59] During the suspension the rights and obligations of the lease are held in abeyance. No development or production activities can take place, no rent is due. (FCLAA amended section 39 to provide that it could not be used to suspend or reduce advance royalties due under section 7(b), so that advance royalties are due on new and readjusted leases under the continued operations requirement.) A section 39 suspension might be justified for a lease that was not currently in production and which would not be reached for a number of years and which could not be mined except from the lessee's operation. The Secretary might suspend the lease until it could be mined to conserve coal resources that might otherwise never be extracted. Other options available to prevent the bypass of Federal coal in such a situation are LMU formation or issuance of an order barring wastage of the leased coal. A suspension allows the lessee to preserve the advantages of a pre-FCLAA lease without satisfying all of the requirements imposed on it. It would also delay readjustment and would extend the section 3 clock by the duration of the suspension. Section 39 suspensions are not available for purely economic reasons, such as failure to find a buyer for the coal or generally poor market conditions.[60]

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[58] 47 Fed. Reg. 33,129, July 30, 1982.

[59] 30 U.S.C. 209.

[60] FCLAA's amendment of section 7 of the MLA repealed the Secretary's authority to suspend operations for up to 6 months during periods when market conditions were such that a lease could not be operated profitably. Public Law 94-377, 90 Stat. 1087. The Secretary retains authority to reduce production royalties for leases that can not be operated at a profit under their terms.

7. The lease can be combined with other Federal or non-Federal coal into a producing LMU.

Under section 5 of FCLAA, production anywhere in an approved LMU can be used to satisfy the production requirements for any Federal leases in the LMU. The Department has determined that LMU production can be used to satisfy the section 3 "producing in commercial quantities" requirement.

Section 3 is silent as to whether production from an LMU is sufficient for section 3 compliance. The language of section 7(b) and section 5 and legislative history of section 5, however, strongly suggest that LMU formation was intended as an aid to development and maximum economic recovery of Federal coal and to satisfaction of diligence production and continued operations requirements. Section 7(b) provides that each lease is subject to the conditions of diligent development and continued operation. If production in an approved LMU can satisfy the section 7 diligence requirement, by extension such production should also satisfy the section 3 production requirement for a nonproducing lease in the LMU.

Section 5 of FCLAA allows the formation of an LMU and provides that:

> In approving a logical mining unit, the Secretary may provide among other things that (i) diligent development, continuous operation, and production on any Federal lease or non-Federal land in the logical mining unit shall be construed as occurring on all Federal leases in the logical mining unit. The Secretary may even amend the terms of lease included in a logical mining unit so that mining under that lease will be consistent with he requirements imposed on the logical mining unit.[61]

Section 5 specifies certain conditions for a logical mining unit. LMU formation is not without problems and issues of its own. Under the Department's regulations and recently proposed guidelines there are many incentives and disincentives for lessees to form an LMU. Before issuance of the 1982 diligence regulations and the February 1985 Solicitor's Opinion and proposed section 3 and LMU guidelines, it was generally assumed that LMU formation would be sufficient to deal with any section 3 and diligence problems for producing mines. The major concerns with LMU formation had been the problem of noncontiguous mine areas, how "excess" reserves would be handled,and how the Department would interpret the provision that the LMU mine plan must provide for extraction of reserves in 40 years or less.

8. The lessee can consolidate the nonproducing lease and a producing lease into a single lease.

There is an eighth option for bringing a nonproducing lease into compliance that may be appropriate in some circumstances. Under his general administrative authority over Federal coal leasing, the Secretary may approve the combining into a single lease of two or more coal leases held by the same owner. Two provisions of the MLA expressly authorize lease consolidation or combination. Section 5 of the MLA allows consolidation of two or more contiguous lease parcels into a single lease of no more than 2560 acres if the Secretary finds it in the public interest.[62] Section 6 of the MLA allows up to 2560 acres of noncontiguous lands to be included in the same lease.[63] The consolidation mechanism could be used to combine a producing lease with a nonproducing lease and might thus allow the lessee to comply with section 3. Consolidation does not impose any of the conditions of LMU approval such as the "40 year mine out" or application of the 1982 diligence system to the leases. Lease consolidation might allow noncontiguous lease areas to be combined. There are currently no regulations governing consolidations. Although the two express consolidation provisions have acreage limits, there is no longer a statutory acreage limit for coal leases other than the overall limits on total acreage holding within a State.

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[61] Public Law 94-377, 90 Stat.1086; 30 U.S.C. 202a.

[62] 30 U.S.C. 205.

[63] 30 U.S.C. 206.

Consolidations have been used in the past to combine producing and nonproducing leases held by the same owner, so that minimum production obligations in the lease terms could be satisfied. Such requests, however, were not always granted, but there was also little effective enforcement of the minimum production obligation. More recently Mobil's Rojo Caballo leases were recombined into a single lease. An 80 acre tract of acquired land in the original lease had been segregated administratively because BLM at the time was unsure whether a lease could contain both public domain and acquired lands. Later, BLM concluded that it could and consolidated the tracts back into one lease. The consolidation removed the possibility that Mobil would have to form an LMU or mine each lease separately in order to comply with diligence and section 3 requirements for what was originally a single lease. Mobil is seeking approval of an LMU combining Federal and non-Federal lands in its Rojo Caballo Mine.

Diligent Development Requirements and Other Production Incentives for Federal Coal Leases

Section 3 creates a strong incentive for at least some Federal coal lessees to bring their leases into production. Section 3 however has disparate effects, it has virtually no impact on a lessee with no immediate need for more coal leases or one that is not involved in other mineral leasing activities. Advocates of repeal and modification of section 3 argue that it is a redundant provision because Federal coal leases are subject to other more direct production requirements that would remain if section 3 were removed. This section examines the production requirements currently imposed on Federal coal leases and explores various alternative mechanisms that can be used to promote timely development of Federal coal deposits.

The expectation of a profit to be made from mining and selling coal is, clearly, the most powerful incentive for a lessee to develop any mine, however, there are times when nondevelopment may be economically preferable. For example, if the lessee anticipates that the price of coal will go up in the future, a delay in development of a particular property may offer prospects for a greater profit later. In other instances, market conditions and excess capacity in existing mines may significantly reduce the probability that a lessee can successfully find a buyer for the coal if development proceeds without any assured contracts. If the lessee is particularly risk averse, it may decline to develop the lease until it has what it perceives as a greater probability of success. Thus a lessee's economic interests can at times be better served by delay than development. But does delay advance the lessor's interest or the public interest? If the lessor's major interest in leasing the coal is receiving royalty payments from mining, delay is not to his benefit. Early production or return of the lease so that it could be sold to another potentially more successful developer would be more advantageous to the lessor. The public interest is also served by encouraging more development so that competition among coal suppliers will tend to keep fuel prices low. To protect the interests of the lessor and to balance them against the interests of the lessee, mineral leases typically contain provisions that assure that the lessee will make a diligent effort to develop the lease or pay the lessor in lieu of production revenues or turn back the lease. These diligence provisions are an important and longstanding part of Federal mineral law as well.

A 1975 study of the Federal energy mineral leasing systems by the staff of the Federal Trade Commission noted the benefits of diligence provisions in Federal coal leases:

> Underlying the imposition of diligence requirements is the notion that the public has an interest in early development and continuous operation of leased Federal resources. Diligence requirements may be viewed as one means of ensuring that the public and not private speculators, recoups any benefit from the increased value of coal over time. In addition they could facilitate alternative uses of coal lands, such as for agricultural purposes, if those uses become more attractive than coal mining and no coal has been mined from the leases.[64]

The Congress reaffirmed the basic policy of the MLA that leases by strengthening the statutory diligence requirements for new leases so that leases not actually producing commercial quantities of coal after 10 years are terminated by operation of law. More recently the Report of the Commission on Fair Market Value Policy for Federal Coal Leases, frequently referred to as the Linowes Commission, made the following findings concerning Federal coal leases:

> The Commission found that diligent development requirements play a central role in the Federal coal leasing program. In the absence of a diligence requirement, the leasing of Federal coal would amount for many purposes to the disposal of coal. The congressional insistence on diligent development of Federal coal is consistent with the broader congressional philosophy of retention of the public lands. Diligent development requirements allow each generation to make its own decisions as to the appropriate development of Federal coal resources. If Federal coal were to pass into private hands it would be much more difficult to maintain control over its development...
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> Diligent development requirements also serve more specific purposes. Significant Federal royalties and state severance taxes create an artificial incentive to delay production on Federal coal. The diligence requirement ensures that production begins fairly promptly.[65]

Section 7 of the MLA in its original and amended forms provides that all Federal coal leases are to be held on conditions of diligent development and continued operations of the mine or mines except when interrupted by strikes, the elements, or casualties not attributable to the lessee. With the Secretary's approval a lessee may comply with the continued operation requirement by paying advance royalties in lieu of production. Payments in lieu of diligent development are not authorized. The penalty for violation of these statutory conditions is revocation of the lease.

IMPLEMENTATION OF DILIGENCE REQUIREMENTS

The Department has implemented the MLA diligent development and continued operations requirements of Federal leases in different ways. All leases are subject to the statutory obligations, although they were not explicitly defined by regulation until 1976. Before 1976, these requirements were applied through various lease provisions and by supervision of lease operations. In 1976, the Department adopted regulations that defined diligent development for all leases as requiring actual production of coal within 10 years. In 1982, the regulations were relaxed to require production within 10 years of the first post-FCLAA lease readjustment for old leases. Separate diligence requirements were adopted for logical mining units.

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[64] U.S. Federal Trade Commission, Bureaus of Competition and Economics, Report to the Federal Trade Commission on Federal Energy Land Policy: Efficiency, Revenue, and Competition, Senate Committee on Interior and Insular Affairs, 94th Cong., 2d sess., (Comm. Print 1976), at 622-23.

[65] Report of the Commission on Fair Market Value Policy for Federal Coal Leasing, February 1984, at 295.

Lease forms adopted by the Department used several approaches to require production. These lease-specific production obligations are relevant because under the 1982 diligence system, pre-FCLAA leases are subject only to these conditions until the lease is readjusted or otherwise amended to apply the 1982 regulations.

From 1920 to the mid-1950s leases generally had both a minimum investment clause requiring investment of a specified dollar amount in development of the lease within the first three years after lease issuance and a minimum production clause requiring the mining of a minimum tonnage beginning in the fourth or sixth year of the lease. These terms could impose quite substantial obligations.

For example, according to the lease records, Utah lease U06039, issued on May 1, 1953, carried a minimum investment requirement of $75,000 of which not less than one third was to be spent during each of the first three years of the lease, unless sooner expended, and a minimum production requirement of 60,000 tons per year beginning with the sixth lease year. The lease rental was set at $1 per acre per year and the royalty at 15 cents per ton. The annual rental payments were $1360.00 and minimum investments were $25,000 per year for three years. Royalty payments on the specified minimum production in year six would be $9000. Not insignificant amounts at the time.[66] Although the lease contained these minimum production terms, the lease was not mined on schedule, and, in fact, it appears never to have been mined. The Department did not, however, routinely ignore the minimum annual production requirement. The lease records show that an application was made in 1958 in the fifth year of the lease to waive the annual production requirement for that year. Another request for suspension was received in August 1959 and was denied in September 1959. An application to consolidate the lease into another lease was also denied.

In 1960 the minimum production requirement was suspended for year ending April 30, 1960, but rental payments were not suspended. This decision was appealed. The lease was subsequently assigned several times and subdivided. It was acquired in 1979-80 by Utah Power and Light Co. The lease was not adjusted when scheduled in 1973, but was readjusted in 1979 for another 20-year term ending in 1993. According to the Department's automated lease record system, the statutory royalty increases were applied to the lease.

Many pre-FCLAA leases also carried a minimum royalty or advance royalty payment tied to the production of a specified tonnage. The effectiveness of these provisions was undercut by another lease provision that allowed suspension of the lease production and payment requirements on payment of an advance royalty with the approval of the Secretary. The advance royalty in many early leases was set equal to the minimum tonnage, even though rentals can be subtracted from royalties, these leases still required royalty payments in excess of rental. In the mid-1950s, the minimum investment clause was dropped and the minimum production obligation was shifted to the sixth year. The advance royalty in lieu of production was set equal to the rental and since royalties could be deducted from rentals was effectively $0.

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[66] The minimum annual production requirement strangely enough appears to be comparable to the 1 percent commercial quantities figure. There is no information available on how the production level was determined. However if one makes some very conservative assumptions about the characteristics of minable reserves in that area circa 1953: 6 foot seam, and underground recovery rate of 40 percent and 1800 tons of coal per acre foot for bituminous coal. total estimated recoverable reserves for the tract would be approximately 5.9 million tons. Annual production of 1 percent would be 60,000 tons.

Two observations may be made about these requirements. There were fewer than 200 leases issued before the mid-1960s and many of them eventually produced coal. Suspensions were often given because of difficulties in developing the lease, market conditions, or the lessee's financial status. But an inspection of some lease records by OTA indicates that the suspensions allowing payment of advance royalties in lieu of the minimum production obligation were denied at times and appeals of these suspensions were also denied. The nonproducing leases apparently continued to be held in violation of lease terms because cancellation proceedings, the penalty for violation were not initiated. It is not known if the cases were ever referred to the Attorney General for prosecution. After about 1960, however, the Department seems to have routinely accepted nonproduction payments on all leases without making specific approvals. The MLA does not authorize payments in lieu of the requirement of diligent development, and the Department in the past has never adopted the interpretation of the MLA or the lease terms that payments suspended the statutory diligence requirement. The lessee's obligation to diligently develop the lease continued even though he might be relieved of annual minimum production and payment obligations. The diligent development obligation can only be suspended for strikes, the elements, or casualties not attributable to the lessee under section 7 and under section 39 in the interests of conservation of the resource, an application for suspension must be made to and approved by the Secretary.

According to an analysis by the Department in 1980, some leases issued between 1920 and 1946 are likely to still contain advance royalty provisions in excess of rental because they were not subsequently readjusted. In 1956 the lease form was changed to delete the minimum investment requirement and to require production in the sixth and succeeding years, but the amount of production was set so that it would yield an advance yield equal to the annual rental of $1 per acre per year. These leases were issued until the early 1970s and many of the earlier leases were readjusted to include these more lenient terms.

In the mid-1960s the minimum production clause no longer specified a minimum tonnage and the advance royalty was still set equal to the rental, calculation of the minimum tonnage was that amount that created an advance royalty of $1 per acre. Also in 1965, the lease form was changed to provide that the lease was subject to reasonable regulations of the Secretary hereinafter in force.

In the early 1970s, the Department began charging slightly higher rentals of $5 acre in the sixth lease year and higher royalties and experimented with advance royalties that might create an economic incentive to produce. Several leases were offered that contained minimum production clauses and significant advance royalty requirements.

One of the major criticisms of the past administration of the Federal coal leasing program in the 1970s was that the Department had failed to enforce the diligence and continued operations requirements against nonproducing lessees by revoking such leases. This view was shared by the Department which adopted final regulations in May 1976 interpreting the diligent development provision of the 1920 MLA as requiring actual production of 2.5 percent of lease reserves by June 1, 1986 under threat of cancellation.[67] Under limited circumstances, extensions of up to 5 years were allowed. These regulations were intended to supersede the unenforced minimum production lease obligations and gave all lessees 10 years to begin mining their undeveloped leases. Despite assurances that the Department was embarking on a vigorous program of enforcement and that the 1976 regulations and other mechanisms would prevent such nonenforcement in the future, the Congress adopted a strict 10-year diligent production provision for new leases and added section 3 to deal with any nonproducing old leases after 1986.

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[67] See 41 Fed. Reg. 21,779, May 28, 1976. The 1976 diligence regulations are discussed at length in United States Congress, Office of Technology Assessment, An Assessment of Development and Production Potential of Federal Coal Leases, December 1981, at 238-252.

The 1976 regulations defined diligent development and continued operations for all leases and were intended to assure that any future enforcement efforts would withstand court challenge. All lessees were placed on an equal footing, the 10-year lead time before enforcement would make it likely that a court would reject a lessees argument that the requirement was unreasonable. The minimum production clauses of most existing leases imposed only token production obligations on the lessees, the 1976 regulations imposed more substantial requirements superseding the lease terms. Even if a lessee might successfully argue that the regulations could not alter the terms of the lease, the lessee would be hard pressed to defend an assertion that failure to develop a lease after more than 16 years was diligent development under the MLA or the Departments regulations or even under the lease terms calling for production beginning in year six. Moreover, the extension provisions added additional flexibility that would also help withstand any challenges as to the reasonableness of the regulations.

The 1976 regulations required pre-FCLAA leases to produce 2.5 percent of lease or LMU reserves by June 1, 1986 or face cancellation for lack of diligent development. Limited force majeure exceptions and five year extensions were allowed. Post-FCLAA leases were bound by the statutory requirements to produce commercial quantities within 10 years of issuance with only force majeure exceptions allowed.[68] Commercial quantities for post-FCLAA leases was set at production of 1 percent of lease or LMU reserves. The Department's position at the time was that the regulations were of general applicability and superseded other lease terms. The existing leases did not specifically equate the minimum production and advance royalty provisions as constituting full compliance with statutory diligent production requirements. Notices were sent to lessees advising them that the regulations were fully applicable and that leases would be explicitly readjusted to require production if due for readjustment before 1986. In 1980 lessees were asked to voluntarily agree to amend their leases to acknowledge the 1976 diligence requirements. A few lessees complied with the request, but following objections from lessees and coal industry trade organizations, the Department discontinued its lease amendment efforts. The lease term used in the late 1970s provided:

> Diligence: To engage in the diligent development of the coal subject to the logical mining unit of which the lease is a part. After diligent development is achieved, the lessee agrees to maintain continued operation of the mine or mines on leased lands, unless consistent with the regulations advance royalty is paid in lieu of continued operations, the terms and diligent development and continued operations are defined in the regulations.

New leases and leases that were readjusted after August 4, 1976, were also required to file mine plans for development of the leases within three years under the 1976 policy.

Because the 1976 regulations superseded the lease specific diligence and production requirements, the Department was not required to treat nonproduction on a lease that provided that production must begin and continue after the sixth year of the lease, as violation of the applicable diligence deadline subjecting the lease to cancellation. The Department's 1976 regulations, in fact, avoided an early test of the lessee's diligent development requirement. In 1976 all but a few nonproducing leases were more than six years old. The Department might have ceased to accept nonproduction payments and immediately sued to have leases cancelled for nondevelopment in compliance with the express provisions of any leases with minimum production clauses.

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[68] The May 1976 regulations were revised to include the statutory changes made by FCLAA. See 41 Fed. Reg. 56,643, Dec. 29, 1976.

In 1982, the DOI significantly revised the diligence provisions for pre-FCLAA leases.[69] Various explanations were given. But, in essence, the change reflected a fundamental shift in the DOI's interpretation of its authority to set diligence requirements for existing leases under FCLAA, the MLA, and the lease terms. The Department cited a September 1981 Solicitor's Opinion reinterpreting the effect of FCLAA on existing lease diligence obligations as requiring the changes.[70] The referenced Solicitor's Opinion did not address the applicability of diligent production requirements to pre-FCLAA leases, but rather dealt with whether the Department must include the higher minimum royalty provisions of FCLAA in leases readjusted after FCLAA. The Opinion concluded that the higher royalty must be applied if and when a lease is readjusted, however, the opinion noted that by statute leases are only "subject to" readjustment so that the Secretary was not required to readjust the leases and could by inaction allow a lease to continue at the lower pre-FCLAA royalty.[71]

The Department issued regulations that extended the date by which existing leases must produce or be cancelled (or terminated) to 10 years after the first lease readjustment after FCLAA. The new rules reduced the amount of production required for "commercial quantities" to 1 percent of lease or LMU reserves for both diligence and continued operations. This action lifted the 1976 diligence requirements in force at passage of FCLAA and that were cited in floor discussion of FCLAA. The effect of the change was to give existing leaseholders up to 30 years from FCLAA to produce 1 percent of coal reserves, before the Department would terminate the lease rights under the readjusted lease terms.

The 1982 regulations substituted yet another diligence system for Federal leases and tied lease production obligations to whether leases were issued or readjusted after enactment of FCLAA. The rules create three categories of leases: pre-FCLAA leases not subject to the regulatory diligence system; post-FCLAA leases and pre-FCLAA leases subject to the regulatory diligence system; and leases in LMUs subject to the regulatory diligence system.

Pre-FCLAA leases not yet readjusted are subject to their specific Federal lease conditions, including minimum production clauses, until the first lease readjustment after FCLAA. Any production on the lease will not credited toward achievement of diligence or continued operation under the 1982 rules until the effective date of the first lease readjustment after August 4, 1976. Pre-FCLAA lessees were given one year, i.e., until August 1983, to elect to become subject to the 1982 diligence system by notifying the Department in writing. Lessees could request that production after 1976 but before approval of the election be credited toward the diligent production requirement. (Under this system, producing leases that have not been readjusted have not complied with the MLA diligent development obligations as defined in the regulations, because they only receive credit for production after the lease has been readjusted or amended to conform to the 1982 rules. Some of these lessees may have already produced enough to satisfy the more stringent standards of the 1976 regulations).

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[69] See 47 Fed. Reg. 33,153, July 30, 1982.

[70] Solicitor's Opinion M-36939, 80 I.D. 1003(1981). The Solicitor's reinterpretation came over five years after passage of FCLAA. The interpretation was either not shared or overlooked by two previous administrations in issuing regulations concerning lease diligence obligations, including contemporaneous interpretations by the Department of the Interior in 1976 when it revised its may 1976 diligence rules to accommodate changes made by FCLAA.

[71] The Department also cited as the basis for its conclusion that Congress did not intend any production requirements to be imposed on pre-FCLAA leases until after readjustments a letter from Secretary James D. Watt to Governor Richard Lamm of Colorado with an accompanying memorandum from the Interior Solicitor of April 21, 1981. The letter was in response to the Western Governors' expressed concerns over and opposition to rumored changes in the diligence requirements for existing leases.

The 1982 diligence system replaced the 1976 diligence regulations and left unadjusted or unamended pre-FCLAA leases subject to whatever production provisions were in the individual lease forms, and also to some as yet undefined Federal common law diligence obligation. As a result, the Secretary could at any time decline to accept payments in lieu of continued operations and decline to waive by inaction the lessee's failure to diligently develop the lease and move to have the lease cancelled in Federal court. There is not however any indication that the Department of the Interior intends to enforce the existing minimum production lease obligations.

Post-FCLAA leases and pre-FCLAA leases readjusted or amended after August 4, 1976, must satisfy the diligent development obligation by producing commercial quantities of coal, defined as 1 percent of lease reserves, within 10 years of lease issuance or readjustment. The diligent development obligation can only be suspended by the Secretary for strikes, the elements, or casualties not attributable to the lessee.[72] After meeting the diligent development obligation, the lessee must maintain continuous operations by mining at an average annual rate of 1 percent of lease reserves based on a three year average. With the approval of the authorized officer, advance royalties can be paid in lieu of production to comply with the continued operations requirement. Only production on the lease after it becomes subject to the 1982 diligence system will be credited toward production of commercial quantities.[73] Any production on the lease after 1976 can be credited towards commercial quantities if the lessee filed a request by August 30, 1983. The lessee must also submit a resource recovery and protection plan within three years after lease issuance or readjustment.

Any Federal coal lease in an approved LMU is subject to the separate diligent development and continued operation requirements imposed on the LMU. The LMU requirements replace the conditions that would apply to the Federal lease individually. Commercial quantities is 1 percent of the total Federal and non-Federal LMU reserves. A schedule for achievement of diligence requirements is established when the LMU is approved. All Federal leases in the LMU are in compliance with diligent development and continued operations requirements as long as the LMU as a whole is in compliance with its LMU obligations. An LMU must produce a total of 1 percent of LMU reserves by the end of its diligent development period. The length of the LMU diligent development period is determined by the applicable diligence dates for Federal leases in the LMU. If all leases in the LMU are already subject to the 1982 diligence system the diligence deadline is 10 years from the most recent post-FCLAA lease issuance or readjustment of the leases in the LMU. If the LMU contains an unreadjusted pre-FCLAA lease, the LMU diligence deadline is 10 years from the effective date of LMU approval. A resource recovery and protection plan for the LMU must be submitted within three years from the effective date of the LMU.[74]

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[72] Note: The Secretary can also grant suspensions in the interests of conservation of the resource under section 39 of the MLA, 30 U.S.C. 209. The 1976 rules allowed discretionary extensions of diligence dates for pre-FCLAA leases. By law, there are no discretionary extensions for post-FCLAA lessees under section 7, 30 U.S.C. 207.

[73] This has the effect of delaying the attainment of diligence in some cases and thus avoiding the imposition of the requirement to produce 1 percent annually or pay advance royalties in lieu of continued operation.

[74] The determination of the diligence periods and recoverable reserves for LMUs are discussed in the LMU guidelines at 50 Fed. Reg. 35,145, Aug. 29, 1985 and in 43 C.F.R. 3480.0-5. (1985).

Under the Department's regulations and guidelines, LMU formation can apparently be used in some cases to extend the diligent development dates of leases in the LMU to the latest date that would be applicable. For example, a lessee might acquire a new small bypass lease or an unreadjusted pre-FCLAA lease in the ninth year of the diligence period of another lease subject to the 1982 diligence system. The lessee could then petition to combine the newly acquired lease into an LMU and thus gain an additional 10 years to achieve diligence and delay any requirement to pay advance royalties if production falls short of the 1 percent annual continued operations level. If the LMU contains only post-FCLAA leases and readjusted leases, LMU formation cannot be used to extend the diligence period.

Payment Requirements for Federal Coal Leases

The payment requirements imposed on Federal coal leases are similar in many respects to payments for non-Federal coal and currently include bonuses, rentals, advance royalties, and production royalties.

A **bonus** is the amount paid for a new lease. In a competitive lease sale, a lease is awarded to the highest bonus bid that equals or exceeds the fair market value of the coal and can be based on a per acre or a per ton payment. The bonus bid is the primary mechanism for recovering the difference in value of Federal coal tracts because under current policy rentals and royalty payments are standard for all leases even though tracts may vary widely in potential profitability. No bonus is required at present on the issuance of noncompetitive preference right leases, but the possibility of requiring some additional payment as a means of assuring a fair return to the public from such leases has been under review.

Rental is the annual payment to hold a lease. For Federal leases it is currently set at $3.00 to $5.00 acre, with an increase after the sixth or tenth year in some leases. Many old pre-FCLAA leases allow rental payments to be offset against any royalty payments, but FCLAA disallowed this credit. Because the setting of rentals is left to the Secretary's discretion, the Department could impose a different rental scheme on leases at readjustment or modification of lease terms with a higher rental for nonproducing leases.

The **production royalties** for Federal coal are set by FCLAA at 12.5 percent of selling price of surface-mined coal and a lesser amount (usually 8 percent) for underground coal. Unreadjusted pre-1976 leases carry significantly lower production royalties than new and readjusted leases; payments of 15 to 20 cents per ton are most common. Only about four leases that were issued or readjusted in the early 1970s contain pre-FCLAA percentage royalties of 4 to 8 percent.[75] The Secretary can temporarily reduce the statutory royalty rates for any lessee that shows that the lease cannot be successfully operated under its terms.

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[75] The FTC staff report used average f.o.b. mine price data to calculate the percentage royalty equivalent of the 22.5 cents per ton royalty in 1971. The percentages were: Colorado, 3.5 percent, New Mexico, 6.9 percent, North Dakota, 11.8 percent, Oklahoma, 3.3 percent, Wyoming, 6.6 percent. On a national basis, a payment of 22.5 cents per ton was equivalent to a 3.2 percent royalty in 1971. Reported f.o.b. mine prices of coal in 1971 were as low as $1.82 in Montana, thus a 22.5 cent royalty on Montana coal would equal a 12.5 percent royalty, the current statutory level. The percent of the coal sales price paid in Federal royalties on a cent per ton basis dropped sharply because of the significant increases in coal prices during the 1970s. See Federal Energy Land Policy: Efficiency, Revenue, and Competition, supra note (64),at 619.

The MLA authorizes payment of **advance royalties** in lieu of continued operations with the approval of the Secretary. The minimum production clauses of many leases require payment of an advance royalty in the sixth year of the lease. However, this requirement was effectively nullified by setting the advance royalty equal to the rental payment and fully crediting rentals against royalties. Advance royalties are now set by regulation as payment of the production royalty that would be due on 1 percent of the lease reserves at a minimum royalty of 12.5 percent for surface mined coal and 8 percent for underground coal. Some leases readjusted between 1976 and the adoption of the 1982 rules changes require advance royalties on production of 2.5 percent of reserves if the lease is not producing at a continued operations rate of 1 percent of reserves. Advance royalties can only be accepted in lieu of production for a total of 10 years over the life of the lease and are recoupable against production royalties. The Secretary can not reduce or suspend payment of advance royalties.

HOLDING FEES FOR FEDERAL COAL LEASES

Holding fees for nonproducing leases are used in private leases, but only to a limited extent in Federal coal leases. Holding fees can generate as much revenue as actual production for private lessors and provide some additional economic incentive for the lessee to produce or turn back the property. Holding fees can be found in various forms, delay rentals, minimum royalties, and advance royalties, for example, and reflect the flexibility and variety that result from lease negotiations between private parties.

A **delay rental** is an amount paid for the privilege of deferring development of a property and can be avoided by relinquishing the lease, or by commencing production. A **minimum royalty** requires that the lessee pay the lessor a minimum royalty annually whether or not coal is actually produced in an amount great enough so that production royalties would equal the minimum royalty. An **advance royalty** is paid before the coal is actually mined and sold either as a deposit against future production royalties or in lieu of production under a minimum royalty provision. In this report "holding fee" is used to refer to any type of payment imposed on a nonproducing lease that might be avoided by producing or relinquishing the lease.

A lease may provide that the holding fee can be fully or partially recoupable against production royalties. There do not appear to be any firm rules for formulations of these provisions in private transactions. Many of the distinctions reflect the difference in tax treatment of such payments. For Federal coal lessees however, the current tax code is flexible in the treatment of delay rentals and many forms of advance royalties.[76]

STRUCTURING A HOLDING FEE

A holding fee can have one or more purposes that will influence how high the fee is set, the fee base, and whether it is recoupable against production royalties. In structuring a fee, one should consider its purpose. For example, is the the fee paid merely to extend the lease for an additional period without production? Is the fee intended to replace production royalties that would otherwise be paid? Is the fee intended to create an economic incentive to force production or reversion of the lease?

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[76] For Federal income tax purposes a minimum royalty which "requires that a substantially uniform amount of royalties be paid at least annually either over the life of the lease or for a period of at least 20 years, in the absence of mineral production requiring payment of aggregate royalties in a greater amount" can be expensed in the year paid, 26 C.F.R. 1.612-3, 1985. An advance royalty paid under a minimum royalty clause can be expensed in the year of production or else capitalized and recovered through depletion at the option of the taxpayer. A delay rental is deductible in the year paid.

If a private lessor wants the fee to accomplish all of the above goals, the nonproduction payments would be set high enough to provide a return on the property and to make it economically disadvantageous to keep the lease without going into production shortly, but not so high as to cause abandonment of an otherwise viable property or to unreasonably divert resources from development. As an additional incentive the payment may be recoupable against future production royalties. Private lessors can negotiate each lease individually and tailor the requirements according to the characteristics of each lessee. Moreover, they can modify the original terms if the lessee encounters unanticipated economic problems in development. Private lessors generally do not allow their leases to be assigned without their consent.

Federal lease provisions are generally standardized for all leases. Because of the large amount of Federal coal, it would probably be impractical for the Department to devote the same level of effort and care as a private lessee in the crafting of individual lease production payment arrangements. For the Federal government as a lessor, it may be better as a matter of policy to accept a holding fee than that is lower than private leases to assure that economically viable properties are not needlessly abandoned because of inflexible standard lease provisions. This does not mean that the Federal payments must be set so low that no properties are abandoned. Because the Federal government leases such large amounts of coal in excess of demand, imposition of very high production forcing advance royalty payments may be burdensome to lessees who have only a slim probability of successfully mining and marketing their coal. But that is precisely the effect such payments are intended to have. If lands are not very close to production, they would not be leased because of the deterring effects of the fair market value bonus payments, diligence requirements, and advance royalty payments. If leased, it would not be economically advantageous to hold them for long periods of time without generating income from them. This assumes that the payment to the government or an assignor for the leases was not so low that it is still economically advantageous to hold the leases even with high advance royalty or nonproduction payments because the cost of acquiring new reserves would be so much higher. If lessees continue to hold old leases with higher rentals and nonproduction payments, that is an indication that the lease is still valuable.

The holding fees need not be recoupable, although it is generally thought that recoupability creates an incentive to produce by holding out the prospect of gaining at least partial credit for payments against future obligations and allows higher payments to be extracted in advance of production. Some private lessees have tempered the impact of advance payments by making them partially recoupable over a short period of time. For example, a lessor might include a provision that 50 percent of the advance royalty paid is recoupable against production royalties in excess of minimum production levels for a period of five years after payment. This provides an incentive to bring the lease into production at greater than the minimum production rate within five years to recapture part of the advance royalty, while assuring the lessor a fairly constant stream of revenue.

If the holding fee is not intended as a major spur to development but rather as an additional payment for the privilege of extending a nonproducing lease, it need not be as high as an advance royalty intended as an effective production forcing mechanism and it need not be recoupable.

But to encourage development production, advance royalties must be high enough so that the lessee is deterred from delaying production, assuming that he can sell any coal that is mined. If the 10-year or other production deadline for Federal leases is maintained a modest holding fee, such as a delay rental payment, might be an effective means of generating revenue from nonproducing leases which provides flexibility to both the government and the lessee, but makes the holding of such leases less economically attractive after a few years. If the fee were too low its effects would be insignificant.

There are many decisions in setting an appropriate holding fee. Payments can be based on acreage, reserves, or minimum production levels. A flat rate can be imposed for all leases or varied by region and mine type or on the sales price of coal. The payment can be fully or partially recoupable or nonrecoupable. Payments might start immediately or after the lease has been held for 10 years, or when the lessee wishes to acquire a new lease. An additional consideration is how long payments should be accepted instead of production. Should the payment in lieu of production be discretionary or nondiscretionary, i.e. must the Secretary approve it initially or every year, or will it be left to the lessee to decide when and if to pay. OTA's review of suggested types of holding fees revealed that different kinds of payments may have different results on project economics depending on high they are, whether they are recoupable and how they are handled for tax and accounting purposes.

Acreage based payments offer the advantage of ease of calculation and little margin for error or uncertainty; but have the disadvantage (assuming a uniform acreage payment for all leases) of not reflecting the differences in the sales price of the coal, mining costs, seam thickness, or coal quality. Reserves-based payments can be made using either a flat cents per ton or percent of value approach. The payment can be made on either total in-place or recoverable reserves. Because of the uncertainties in calculating the reserves under lease, there is more uncertainty and potential for disagreement in setting reserves payments than acreage payments. However, OTA believes that there is sufficient reliable information on leased coal reserves for the Department and the lessees to estimate reserves within an acceptable margin of error for the purposes of establishing reserves-based payments.

A flat rate per ton offers ease of calculation but does not distinguish between the characteristics of coals in different regions. Unless it includes an inflation adjustment, it would remain constant as the price of coal rises or falls. An ad valorem tonnage based payment is more closely tied to the price of coal, and to high mining costs. It rises with inflation and declines with a drop in coal prices. In the absence of mine specific production costs, the Secretary would have to establish a mine mouth price of coal for some leases. The additional calculations and information requirements of an ad valorem rate could also make the determinations suspect if they appeared to be too low.

Lessees with thick or multiple seams (more tons per acre) generally prefer an acreage based payment, because they effectively pay less. Lessees with thin seams would prefer a tonnage based payment up to a certain level in comparison with an acreage payment. Lessees who have coal with a high sales price, generally would not like an ad valorem rate. Coal sells for a high price generally because of high mining costs primarily associated with underground mines and the higher per ton price needed to recoup the investment and a reasonable return than required for a larger surface mine with the same investment. Ad valorem rates would tend to have a greater impact on them. A flat rate of, for example, 1 cent per ton would tend to have less impact on the high cost underground mine producers than it would on the relatively low cost surface mines. This does place greater economic pressure on low cost producers to develop, which for many policy reasons may be a desirable result.

The ad valorem approach also has some advantages. It seems to produce more revenue. It increases as the price of coal increases, thus could keep pace with inflation. An ad valorem rate favors low cost producers as it tends to make high cost and underground coal even more costly, assuming they pay the same rate. It's major disadvantages is that it is more complex to administer if it is done lease by lease rather than on regional basis, because the Department must establish a selling price for coal that has not yet been sold. If the same rate is applied to all coal, it has an uneven effect.

The relative advantages and disadvantages of escalating payment requirements are based almost entirely on how such a mechanism is structured. Properly constructed, it could be quite effective in imposing increasingly more pressure. Failing that, it seems to offer no significant benefit over other payment approaches for the lessor.

Advantages include a low initial cost, higher later cost, which allows cost impact to be phased in gradually. The low initial holding cost might allow flexibility and low cost extension of time to comply. Steeper later payments may provide the effective force for lessee to develop or divest and is similar to payments associated with a gradual scale up of mine development and production. The approach is intuitively appealing as an increasingly more stringent requirement. A major disadvantage is that unless the step up in payments were steep, there is no inherent production forcing effect of graduated payments that are set at the low rates that have been suggested. At year 10 or 11, graduated payments starting from low level would not tend to place lessor in same position as either actual development or arguably lease turnback with the chance or resale. Graduated payments will yield less in actual terms than an average of the graduated payments over the same period because of the time value of higher payments in later years. Graduated payments may actually be slower than mine scale up and might be an incentive to delay production. Only with very large mines or unusual circumstances would startup rate be at a tenth of a percent per year. The escalating rate yields less revenue that the constant rate, when the constant rate is the average of the escalating rate; this is due to the time value (discounted value) of the higher rates in later years.

A payment lower than that required to force production that was adopted as an adjunct to the section 7 diligence provision could be useful tool and revenue option. OTA assumes that any section 3 holding fees are intended to impose a penalty or additional financial obligation on the lessee. The purposes of such a payment would be: for the privilege of continuing to hold the lease without production; for maintaining the qualification for more leases; to provide an incentive for either developing or getting rid of the lease; and to generate some income to the government from old leases that were originally acquired at very low or no bonus payments. The levels of payment required to satisfy each of these goals is different. The payments can be as high as needed, in the judgment of Congress or the Secretary, to extract a fair price in return for the benefit conferred. If the intent is to allow a lessee to buy out of the section 3 penalty and to generate some revenue, comparison with other lease obligations or the bonus to be paid for a new lease are useful in deciding "how much is enough" for such payments. If, however, the payment is intended primarily to spur the lessee into making a decision to produce or give up the lease by making holding the lease without producing too costly, then the determination becomes more complex. Production forcing payments would have to be set high to force such action for old leases over 5 to 10 years, and even higher if recoupable.

The relationship of any new payment to existing requirements is an additional consideration in setting a production forcing payment. Section 7(b) allows payment of advance royalties in lieu of continuous operation. Currently these royalties are based on production of 1 percent of reserves at the 12.5 percent or 8 percent of value for new and readjusted leases. There is no authority to reduce these payments. The continued operation payments become due once the diligent development requirement is satisfied and the lease is not being mined. These advance royalty payments can be quite high. A lease with a 400 million ton reserve with 4 million tons of production in the Powder River basin at a f.o.b mine price of $7.00 per ton would require an advance royalty of $3.5 million per year for the privilege of deferring production. The additional new holding fee should not be so low that it actually creates a disincentive to commercial production. Conceivably it might be less risky financially for a lessee to stay nonproducing than to satisfy diligence and become subject to section 7 advance royalties. Also one might consider whether a producing lessee should be allowed to make section 3 payments in lieu of production rather than paying advance royalties under section 7(b) or forming an LMU.

A holding fee, similar to a delay rental, a payment for extending a lease without production, *would seem to be an appropriate approach for section 3 and possibly section 7(a).* If two payments were be imposed then each might have to be set lower, or some kind of setoff might be considered. For most leases a section 3 payment will become due well before any lease might be subject to termination under section 7(a) or under the Department's 1982 diligence system. A payment that effectively resulted in paying 10, 25, or even 50 percent of what would be paid for a new lease seems to have some merit for old leases. Value is returned to the government, the lessee can continue to hold the lease for less than acquiring a new lease, but there is the prospect of a significant financial loss if the lease is lost.

OTA estimated the payments to the government and the net present costs to the lessee for a range of holding fees described in Table 30. Table 31 shows the total payments over 10 years, the net present value of the payments, the net present cost to the lessee, and the after tax net present cost to the lessee. OTA estimated the relative costs of selected fee formulations to show how different formulas might have different results for two model mines: a large surface mine in the Powder River basin of Wyoming with 200 million tons of reserves and an underground mine in Utah with over 21 million of reserves. Mine size was based on a review of tracts with section 3 compliance problems. OTA has a computer model available that allows the calculation of different fee structures for Federal coal leases. The appendix includes a summary of the mine characteristics and includes more information on the assumptions used in the analysis and the holding fees analyzed.

The fees analyzed in Table 31 are similar to some recently proposed holding fees summarized in Table 30. Are these various holding fees reasonable? How high can they be without creating a deterrent for developing otherwise viable operations? There are a number of proposals and analyses that support the use of very small payments for section 3 compliance. OTA found that some of the suggested payment levels are probably too low to have any real impact as production incentives. (See Appendix C.) OTA found that there are several available kinds of lease transactions that provide a useful reference for comparing the potential economic impacts of holding fees. These include: a comparison of cumulative holding fees with the bonuses paid to acquire new lease tracts; a comparison of annual holding fees with rentals and royalties on existing leases; a comparison of total holding fees with the overall investment in development of a new mine.

OTA looked at the prices per ton in the 1981-82 regional coal sales to select several representative costs per ton in those sales assuming that the sale data reflect what lessees might have to pay for a new tract.[77] The bonus payments ranged from a low of $ 0.0003 per ton for a production maintenance tract in the Hanna Basin of Wyoming to as much as $0.46 for a large new production tract in central Utah. Very large new production or production maintenance tracts in the Powder River basin were sold at between $0.025 and $0.08 per ton in 1982. The better quality new production tracts in Northwest Colorado sold from $0.11 to $0.33 per ton in 1981. In Utah production maintenance and new production tracts sold from $0.06 per ton to as much as $0.68 per ton in 1981 to 1982. All new leases carry the higher 12.5 percent (or 8 percent underground) statutory royalties and ten year diligence periods. Many noncomplying section 3 leases carry significantly lower royalties and more lenient production requirements and so may be worth considerably more than new leases on the same lands. If one compares the net

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[77] Without expressing any determination of whether the prices received were truly reflective of fair market value or represented the actual market value of the Federal reserves in those regions at the time, or now, OTA notes that there is substantial disagreement between the Department and its critics in Congress and elsewhere over whether the prices were adequate.

TABLE 30

SELECTED HOLDING FEE PROPOSALS FOR FEDERAL COAL LEASES

FEE STRUCTURE	SOURCE
Acreage-based:	
Flat rate $25 per acre per year for each noncomplying section 3 lease; recoupable against future production royalties	Testimony, B.R. Brown, Consolidation Coal Co., 06/04/85
Annual Rental Surcharge on new coal leases to noncomplying section 3 lessees $25 per acre for tracts up to 100 million tons of reserves $35 per acre for tracts from 100 to 300 million tons of reserves $45 per acre for tracts over 300 million tons of reserves Total acreage on which annual rental surcharge is paid not to exceed total acreage of noncomplying section 3 leases; payments are recoupable against future production royalties.	National Coal Assoc. proposal; also S.372
Reserves-based:	
Annual advance royalty of $0.0005 per ton of recoverable reserves for noncomplying section 3 leases and for extending the ten year diligence period on new or readjusted leases; recoupable.	American Petroleum Institute proposal, staff paper 7/85
Annual holding fee of from $0.001 to $0.01 per ton of recoverable reserves for noncomplying section 3 leases; payment level to be set by Secretary at level sufficient to create a production incentive; nonrecoupable.	Subcomm. on Mining and Natural Resources, H.R. 1934, 7/85
Annual holding fee escalating from $0.001 to $0.01 per ton of recoverable reserves over ten years for noncomplying section 3 leases; nonrecoupable.	Remarks before American Mining Congress, Rep. Udall, 2/85
Ad valorem or production-based:	
Annual advance royalty at statutory rate (12.5 percent) on assumed production escalating from 0.5 percent of reserves in the first year to 2.5 percent of reserves in years 5 to 10 for readjusted leases and for extending the ten year diligence period on new leases beginning in the eleventh year.	Commission on Fair Market Value Policy for Federal Coal Leases, example
Annual advance royalties at the statutory rate on assumed production escalating from 0.1 percent of reserves in year 11 and an additional 0.1 percent of reserves for each subsequent year to a maximum of 1 percent in year 20 for the purposes of extending the ten year diligence period for new and readjusted leases; recoupable against future production royalties in excess of annual 1 percent continued operations requirement.	National Coal Assoc. proposal, S. 570, (also S. 372 without minimum royalty)
Annual advance royalties at the statutory rate on assumed production of 0.3 percent of reserves; creditable against future production royalties in excess of annual minimum royalty.	Department of the Interior, Bureau of Land Management, Staff proposal, 9/85

TABLE 31

ANALYSIS OF SELECTED HOLDING FEE PROPOSALS

HOLDING FEE	ANNUAL PAYMENT		TOTAL PAYMENT		NET PRESENT COST	
	Wyoming	Utah	Wyoming	Utah	Wyoming	Utah
Flat Rate						
1. $25 /acre	50,000	50,000	500,000	500,000	250,938	250,938
2. $0.001/ton of reserves	180,000	21,600	1,800,000	210,000	903,378	108,405
3. $0.01/ton of reserves	1,800,000	216,000	18,000,000	2,160,000	9,033,784	1,084,054
4. $0.0005/ton of reserves	90,000	10,800	900,000	108,000	451,689	54,203
Ad Valorem on Production						
5. 0.3 % reserves at standard rate 12.5% surface 8% underground (without adj. for recoupment)	513,000	134,784	5,130,000	1,347,840	2,477,774	648,790
6. Escalating from 0.5 to 2.5 % reserves at standard rate over years 1-5, then at 2.5 % years 5-10 (without adj. for recoupment)	855,000- 4,275,000	351,000- 1,755,000	34,200,000	14,040,000	14,923,170	6,126,354

SOURCE: Office of Technology Assessment

present cost of various holding fee options to what a lessee might expect to pay for a similar tract as a new Federal coal lease, one finds that the total holding fee payments range from five percent or less of the bonus value to as much as one half of the bonus value. Using the net present cost allows the two lump sum payments to be compared

Existing leases pay from $1 to $5 per acre in annual rentals. A 2,000 acre lease would thus generate from $2000 to $10,000 annually. Leases that are subject to continued operations requirements can pay advance royalties of as much as 12.5 percent of the selling price on annual production of 1 percent of reserves. For a mine with 200 million tons of reserves in the Powder River basin, section 7(b) advance royalties, which can be used to comply with section 3, would be $1.5 million per year on coal selling at $6.00 per ton. These advance royalties can later be credited against production royalties.

According to testimony presented before Congress in hearings on section 3 legislation, pre-mining capital investment costs for a large surface mine in the Powder River basin of Wyoming can be in excess of $100 million.[78] For a large underground mine in the Uinta Region of Colorado, capital costs were estimated at about $50 million, with total operating costs of over $65 million during mine development and initial commercial production.

OTA's review of various holding fees indicated that aggregate payments under some options when compared with other types of payments on Federal coal leases and the overall investment required for a new lease or mine, were probably not significant enough to prompt a lessee to relinquish a lease if production were not imminent within a few years. Moreover many holding fees have disproportionate regional impacts because of the difference in mining costs between regions. Taking into account the various considerations in setting a holding fee, such as ease of administration, predictability, and effectiveness, OTA found that a nonrecoupable annual payment at a level of about 1 cent per ton of recoverable reserves, for example, would measurably affect the economics of holding nonproducing leases in virtually all regions and would place at least some economic pressure on lessees to develop or relinquish leases. It would place considerably more pressure on lessees with low cost low price reserves than on higher cost high price producers. It would provide lessees with some flexibility in complying with section 3 and would additionally generate revenues to the Federal government and the States from pre-1976 leases. If the payments were made to run with the lease and not end if the lease were assigned, it would also diminish the potential for lessees to benefit from any increase in the price of Federal reserves, because the new lessee would have to factor in the payment of holding fees to the government in deciding how much to pay for the lease. The use of holding fees as alternative production incentives for Federal coal leases is further discussed in the following chapter.

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[78] See for example, Statement of Mobil Corporation in Hearings on H.R. 1530 Before the Subcommittee on Mining, Forest Management, and Bonneville Power Administration of the Committee on Interior and Insular Affairs, 98th Cong. 2d Sess., June 21, 1984.

CHAPTER 5

ALTERNATIVE LEGISLATIVE OPTIONS FOR PROMOTING TIMELY DEVELOPMENT OF FEDERAL COAL LEASES

How long and under what conditions a lessee should be allowed to hold a Federal coal lease without producing is fundamentally a political decision. The decision largely depends on one's views on the relative importance of sometimes conflicting policy goals underlying the Federal coal leasing program and on how vigorously the diligent development requirements should be enforced for a resource that is abundant and an industry that historically suffers chronic overcapacity. In the 1976 amendments, Congress firmly asserted a policy that Federal coal leases are to be held for production and that production should begin within a reasonably short period of time. New leases must produce in 10 years or they are terminated. Congress left the production requirements imposed by the 1976 regulations and lease terms for pre-FCLAA leases untouched. Congress did, however, restrict future acquisition of new leases by nonproducing lessees by adding section 3. This nonproduction penalty was aimed directly at the old pre-FCLAA leases and particularly at the holdings of large energy companies and other conglomerates.

In the "normal" competitive structure of western coal operations there is a significant excess of production capacity over current production. There is simply more coal under lease than can reasonably be mined and sold or committed under long-term contract in the next 5 to 15 years. This situation is unlikely to change because leasing policies over several administrations have tended for various reasons to favor leasing of coal reserves well in excess of the amounts needed to meet projected demand. For this reason there will be many Federal leaseholders that will not be able to mine their leases despite even their most "diligent" efforts at marketing and development. It is not surprising therefore, that Federal coal lessees, including many major companies, are seeking legislature relief as section 3 production dates approach. But section 3 relief raises a number of difficult issues concerning the management of Federal mineral resources and energy competition.

In evaluating various proposals for amending the Federal coal leasing laws, the preceding two facts should be kept in mind. Under current law a Federal coal lease has an initial term of 20 years, but any lease that is not producing after 10 years is terminated. This schedule includes a reasonable allowance for the time and efforts necessary to market coal and to plan, permit and construct a mine. OTA has previously testified that 10 years provides ample time to bring a lease into production, but attaining full operating capacity can take much longer.

OTA has examined a range of possible legislative options for amending section 3. The options, their advantages and disadvantages are discussed in this section. OTA found the contributions of the participants at its May 1985 section 3 workshop were extremely useful in evaluating these options. The major legislative options for amending section 3 that we have analyzed include the following:

Option 1: Keep section 3 unchanged.
Option 2: Repeal section 3.
Option 3: Limit section 3 to new coal leases only.
Option 4: Extend the time to comply with section 3.
Option 5: Modify section 3 to allow achievement of alternative lease development milestones to satisfy the producing in commercial quantities requirement.

Option 6: Remove the 10-year holding period for section 3 and make disqualification applicable to anyone holding a nonproducing lease that is more than 10 years old.

Option 7: Allow noncomplying lessees to make annual payments in lieu of production on old leases to qualify for new leases.

Option 8: Impose a surcharge on all new leases acquired by a noncomplying lessee.

Option 9: Require turnback of an equivalent amount of noncomplying lease reserves or acreage to qualify for each new lease.

Option 10: Allow relinquishment of all noncomplying old leases in exchange for section 3 relief and a preferential option to purchase a new lease for the same lands if they are reoffered after being subject to land use planning, environmental screening, and surface owner consent requirements for new leases.

Several options have parallels in legislation that has been introduced in the 99th Congress. OTA's discussion of the options does not deal with the specifics of individual bills, but rather seeks to contrast different generic approaches. In evaluating each option, OTA considered several factors: 1) how well each option provides relief from section 3 disqualification for the different classes of noncomplying lessees; 2) how well the option advanced the policies inherent in section 3 of encouraging production, deterring speculation, and discouraging the extensive holding of nonproducing coal leases by large energy conglomerates; and 3) how easily and predictably the option can be implemented and administered. (See Table 32.)

Several options are more or less likely to promote the various goals of section 3 legislation depending on which goal is given priority. Several options would assist nonproducing lessees in complying with the producing in commercial quantities requirement, while at the same time maintaining the policy that leases are to be held for development and production, but the balance between these two goals is struck differently in each. For example, if a major goal is providing flexibility for section 3 compliance, holding fees would offer this benefit to all lessees, while maintaining an economic incentive for development. It would also be possible to combine several options, such as a holding fee or lease surcharge and a turnback requirement to give lessees a choice of alternative compliance mechanisms.

Option 1 - keeping and enforcing section 3 unchanged - is most consistent with the purposes for which section 3 was enacted, particularly since the Department of the Interior has substantially relaxed, or even nullified, most production requirements for pre-FCLAA leases. OTA's analysis in Chapter 4 shows that the Department has ample discretion to resolve most compliance difficulties for those lessees that are producing or have produced coal from their leases or that have experienced unusual delays in mine development. Keeping section 3 would maintain fairness for lessees who have already relinquished or sold leases or made substantial investments in mining operations in order to comply.

Option 1 and Option 10 appear likely to return a significant number of nonproducing leases to the government so that environmentally unsuitable lands are removed from the threat of mining and the remaining valuable coal tracts may be reoffered for lease at fair market value. Option 10, the lease rollover option, would give the relinquishing leaseholder priority in obtaining the new lease for fair market value.

Option 7 maintains the underlying policies of section 3 but gives the greatest degree of flexibility to lessees and the Department in avoiding the section 3 disqualification. Option 7 holding fees would allow a lessee to make qualifying annual payments on all noncomplying leases in order to retain eligibility for new leases. An economic penalty would be imposed for nonproduction, but lessees would be allowed to keep old leases and acquire new ones. This option could be reinforced by an additional amendment that would apply similar nonproduction payments to all old leases on the next lease readjustment. Substantial holding fees would force some leases to be relinquished and would lessen the assignment value of others, thus discouraging speculation. In addition, the qualifying payments would provide some pre-production revenues to the Federal and state governments.

Repeal of section 3 (Option 2) or limiting it to coal leases only (Option 3) would provide the greatest relief from the effects of section 3 enforcement. These two options also remove or lessen the only statutory incentive for the major nonproducing lessees to begin mining coal from their leases or get rid of them before the mid-1990s when current diligence requirements might be enforced. Given the uncertainty over what diligence requirements are applicable to pre-FCLAA leases and when, if ever, they must be enforced, these options may effectively remove the only restraint on continued holding of these leases. These two options therefore appear to be inconsistent with some of the fundamental policies underlying section 3 and the rest of FCLAA.

The lease turnback approach (Option 9) offers the greatest benefit to leaseholders that have large amounts of nonproducing acreage or reserves (that is, next to repeal). These lessees could hold nonproducing reserves until and unless a new coal lease is sought. Turnback is only workable if section 3 is applied to coal leases only.

Option 8, would impose a surcharge on new coal leases sought by a noncomplying leaseholder and would also be attractive to some major noncomplying lessees, particularly if only a small amount of additional acreage or reserves is needed.

Lessees that for some reason cannot satisfy the section 3 commercial quantities test as currently structured by the Department, but that are producing or close to production would be aided by three options: Option 4, an extension of the section 3 holding period; Option 7, qualifying payments on any noncomplying leases; and Option 5, acceptance of achievement of alternative mine development milestones to comply with section 3.

Option 6 would magnify the impact of section 3 by making it apply to all nonproducing leases by removing the ten year holding period. This would advance the original purposes of section 3 to encourage production and deter speculation, and reverse in part the Department's relaxation of diligent production rules. A more stringent disqualification penalty would, however, would mean continued pressure for legislative relief, unless additional exceptions were allowed.

These options were evaluated primarily as alternatives for section 3, but several options could also be used to provide an alternative compliance mechanism for the MLA's section 7 diligence requirement for new and readjusted leases. Among alternative options for the existing section 7 diligence requirements are: 1) an extension of the 10-year period, 2) the use of alternative development milestones to satisfy the initial diligent production obligations, 3)the use of a holding fee to extend the 10-year diligence period for nonproducing leases.

TABLE 32

OPTIONS FOR PROMOTING TIMELY PRODUCTION FROM FEDERAL COAL LEASES
COMPARISON OF SECTION 3 OPTIONS AND POLICY OBJECTIVES

POLICY GOAL OR EFFECT	OPTION 1	OPTION 2	OPTION 3	OPTION 4	OPTION 5	OPTION 6	OPTION 7	OPTION 8	OPTION 9	OPTION 10
Requires legislation	YES	YES	YES	YES	MAYBE	YES	YES	MAYBE	MAYBE	YES
Encourage production	YES	NO	NO	YES	YES	YES	YES	MAYBE	MAYBE	MAYBE
Encourage turnback	YES	NO	NO	MAYBE	YES	YES	YES	MAYBE	MAYBE	MAYBE
Deter speculation	YES	NO	NO	YES	YES	YES	YES	MAYBE	MAYBE	MAYBE
Generate revenue	NO	NO	NO	NO	NO	NO	YES	YES	NO	YES
Promote diligence policy	YES	NO	NO	YES	YES	YES	YES	YES	NO	YES
Ease of administration										
increases burden	YES	NO	NO	YES	YES	YES	YES	YES	YES	YES
decreases burden	NO	YES	YES	NO	NO	NO	NO	NO	NO	NO
Provide flexibility										
to Department	NO	N/A	NO	YES	YES	NO	YES	NO	NO	YES
to Lessees	NO	N/A	NO	YES	YES	NO	YES	YES	YES	YES
Give additional time										
to all lessees	NO	N/A	NO	MAYBE	NO	NO	YES	YES	NO	NO
to leases under development	NO	N/A	NO	YES	YES	NO	YES	YES	NO	NO
Provide relief from penalty										
to all lessees	NO	YES	NO	NO	NO	NO	YES	YES	NO	YES
to oil and gas lessees	NO	YES	YES	NO	NO	NO	YES	YES	YES	YES
to producing lessees needing time to meet CQ	NO	YES	NO	YES	YES	NO	YES	YES	NO	NO
to lessees with many noncomplying leases	NO	YES	NO	NO	NO	NO	YES	MAYBE	YES	MAYBE
Make lease retention an economic decision	NO	YES	NO	NO	MAYBE	YES	YES	NO	MAYBE	MAYBE
Reduce lease inventory	YES	NO	NO	MAYBE	MAYBE	NO	MAYBE	MAYBE	NO	YES
Maintain lease inventory	NO	YES	YES	MAYBE	MAYBE	YES	MAYBE	MAYBE	YES	NO
Improve quality of lease inventory	YES	NO	NO	MAYBE	MAYBE	YES	MAYBE	MAYBE	YES	YES
Maintain fairness for complying lessees	YES	NO	NO	YES	YES	YES	YES	YES	NO	MAYBE
Create incentive for holding leases for resale or exchange	NO	YES	YES	MAYBE	NO	NO	NO	NO	YES	NO
Eliminate potential bidders	YES	NO	YES	YES	YES	YES	NO	NO	MAYBE	MAYBE

NOTES:

YES = Option has effect or advances policy goal.
NO = Option does not have effect or hinders policy goal.
MAYBE = Overal impact of option not certain and/or depends on response of lessee.
N/A = Not applicable.

SOURCE: Office of Technology Assessment

Option 1:

No Action - Keep Section 3 Unchanged.

This option maintains the status quo. Section 3 would be left unchanged. After August 4, 1986 the Secretary could not issue new onshore Federal mineral leases for coal, oil and gas, oil shale, gilsonite, sodium, phosphate, sulfur and potash to any Federal coal lessee (or its affiliates) if the lessee has held a coal lease for 10 years and is not producing coal in commercial quantities. OTA assumes that the Interior Department will follow the Solicitor's opinion of February 12, 1985 in implementing section 3.[1] It is not known how the Department will exercise any of its residual discretion in interpreting key terms such as: "producing in commercial quantities," "affiliate" or "controlled by or under common control with," or "except as provided for in section 7(b)." These interpretations could be used to reduce the potential impacts of section 3 enforcement. Third parties will aid section 3 enforcement for oil and gas leases by protesting or appealing any lease awards or issuances to possible noncomplying leaseholders and related entities.

The noncomplying lessee, its parent company and any affiliates and subsidiaries, will be foreclosed from onshore mineral leasing as long as they hold the nonproducing leases. The MLA permits a noncomplying lessee to obtain additional Federal coal through lease modifications and assignments; however, DOI has decided that it will also apply the section 3 disqualification to coal lease assignments. Oil and gas activities will be limited to assignments of leases or operating interests. It is unlikely that the Department would extend the section 3 disqualification to oil and gas lease assignments because of the different statutory and lease provisions on such assignments.

The section 3 penalty could force the sale or relinquishment of nonproducing coal leases. However, many pre-FCLAA leases were originally acquired at very low cost and the investments in them have been minimal compared to cost of opening a new mine or acquiring new leases. For these lessees, any loss due to relinquishment would largely be of a competitive advantage rather than of past expenditures. It is likely that some of the better quality noncomplying leases could be sold for substantially more than the Federal Government was originally paid for them, even taking into account the effects of inflation in intervening years.

The section 3 disqualification could reduce the number of potential bidders for Federal coal leases and other onshore competitive mineral leases. The impacts of these disqualifications may not be as significant as the section 3 noncompliance figures suggest.

Several factors limit potential impacts on coal leasing. There are normally few bidders for any given coal tract because interest in individual tracts is usually limited to only a few firms. The fair market value requirement, if strongly administered, can assure that the acceptable bid reflects a fair return to the public for coal leases. Reduction in the number of potential bidders could have little or no effect on lease sales or revenues unless the lessee was a likely bidder for a particular tract. On the other hand, it is possible that the additional bonus premiums might be reduced on tracts where there would have been intensively competitive bidding between parties that might drive up the auction price of the coal over its fair market value if the disqualified bidder could compete. In these cases, reliance on sale competition as an indicator or guarantee that the highest bid is fair market value becomes even less tenable than previously. Moreover, fewer tracts might be leased if the most likely or only bidders are disqualified. The currently available excess production capacity in mines held by complying lessees also makes it unlikely that coal supplies to consumers will be affected or that Federal production royalties would be lost.

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[1] Solicitor's Opinions are generally binding on the Department, however Solicitor's Opinions can be changed or modified. There is recent precedent for revisions and even reversals of Solicitor's conclusions of law concerning the interpretation of various provisions of the governing coal leases. Among the most notable were the 1981 opinion on applicability of the 1976 diligence regulations, and an earlier series of opinions on the effects of mining claims on the validity of coal prospecting permits. See the discussion of the later issue in chapter 9 of OTA's 1981 coal leasing report.

Overall impacts on competition for Federal oil and gas leases also should be minimal. Most onshore oil and gas leases are not awarded by competitive bidding, but are awarded through the lottery system or over the counter noncompetitive leasing. Many competitors for oil and gas leases are unlikely to have any involvement in coal leasing and would be unaffected by section 3. It is also doubtful that a major oil and gas producer would abandon participation in Federal onshore oil and gas leasing to preserve nonproducing coal reserves, particularly since coal operations typically contribute only a minor share of corporate revenues. One major avenue of lease acquisition remains unaffected; noncomplying coal lessees and their affiliates can secure onshore mineral leases by assignments.

Advantages:

1. No legislative action is required.

2. Congressional inaction would be interpreted as reaffirming FCLAA's policy that Federal coal leases are to be held for timely production.

3. Keeping section 3 preserves the only remaining FCLAA-era requirement that might force development, turnback, or divestiture of nonproducing old leases in 1985-90s rather than 20 or more years after passage of FCLAA. Moreover, the firms most affected by potential section 3 disqualification are large energy companies with other coal and mineral leasing interests which were the particular targets of Congress in passing section 3.

4. Section 3 enforcement maintains fairness for lessees who have already brought leases into production, or relinquished, or traded old nonproducing leases to comply.

5. Assignments, or sales of new leases on relinquished tracts could make leases available for development by new parties.

6. Relinquished leases can be subjected to land use planning and screening and surface owner consent requirements before reoffering for sale by competitive bid. Resale could generate revenues for State and Federal government. Surface owners of lands leased before FCLAA without surface over consent might be eventually freed from the threat of dispossession if leases are relinquished.

7. The quality of the leased reserves inventory could be improved through relinquishment of leases with poor development potential. The accompanying reduction in the total amount of leased reserves might make future new lease sales easier to justify politically.

Disadvantages:

1. Disqualification could be imposed for only one old nonproducing lease. Companies with many noncomplying leases would be treated the same as a company with one.

2. Delays by the Department in issuing guidelines interpreting section 3 and specifying procedures for qualifying for exceptions to it have left many lessees with producing mines with

uncertain prospects for obtaining approvals of LMUs or changes in operations before August 4, 1986.

3. Lack of flexibility in interpreting commercial quantities under existing rules could lead to a harsh disqualification for lessees with large tracts that have begun lease development and production but have not yet reached a production rate of 1 percent of reserves. Some parent companies have threatened that they might sell or abandon a subsidiary's developed coal property rather than risk section 3 impacts on oil and gas activities.

4. Administrative uncertainties and delays in leasing coal and other minerals would be created if effective procedures are not introduced to determine section 3 compliance status of lease applicants and bidders.

5. Section 3 can prevent issuance of coal and other preference right lease applications (PRLA's) to prospectors who had invested time, effort, and money in discovering commercially valuable deposits.

6. Companies could turn back leases on which some preparation for development has occurred, possibly increasing the development time for the same tract if it is later resold and reissued to same or different company.

7. The inventory of existing leased reserves available to be mined could be reduced at a time when the potential for additional future leasing is highly uncertain because of delays, and reorganization of the coal program. This impact could negligible if the Federal coal program resumes operations with more predictability and greater public confidence.

8. Some operators might prematurely mine areas of existing mines at added cost or stockpile coal with no purchasers to comply with section 3 guidelines. (If a mine is producing or near to production, the potential period during which section 3 would apply may be very short -- a couple of months or a year or two at most. The disqualification could nevertheless be disruptive and restrictive of other mineral leasing activities, particularly oil and gas operations.

9. States would lose annual rental payments through relinquishment of leases with poor development potential. For States with significant acreage under lease but little production, the loss of one source of annual revenue would be small but nevertheless significant.

10. Many nonproducing lessees are left unaffected by section 3 because it creates a penalty only for those noncomplying lessees seeking new leases directly from the Government.

11. Disqualifications could reduce the number of coal tracts leased and the competitive bonus revenues where the noncomplying lessee is the most likely or only bidder.

Option 2:

Repeal Section 3

Repeal of section 3 in its entirety would eliminate most of the future impacts of section 3 if passed on before August 4, 1986. The other production-forcing provisions of the MLA would remain in effect. New leases would still have to produce in 10 years or be terminated. Existing leases would continue to be subject to the diligence provisions of the MLA, specific lease terms, and the 1982 diligence regulations (or whatever requirements the DOI may in the future apply to such leases.) (Changes to the diligence requirements of section 7 of the MLA imposed by section 6 of FCLAA are not considered here; see the discussion in Chapter 4.) The fairness issue would be raised by lessees who have already moved to bring operations into compliance with section 3 by relinquishing, developing or selling nonproducing reserves.

Repeal of section 3 might make old leases even more valuable than new leases because the old leases would no longer carry the potential for lease disqualification. To a very large extent, the 1982 changes in diligence regulations which gave lessees an additional 2 to 20 years to comply with the diligent production requirement have already widened the disparity between old and new leases. Market conditions may have partially offset any increase in value.

Advantages:

1. Repeal provides maximum relief from section 3 penalty for all lessees.

2. The potential administrative burden in ascertaining qualifications of lessees and applicants is lifted from coal and other leasing programs

3. The need for accelerated review and approval of LMU applications for producing mines is reduced because it is no longer necessary to satisfy section 3 production requirement. Some lessees can avoid additional production requirements imposed with LMU approval that would otherwise be needed to comply with section 3.

4. Penalties on noncoal leasing activities resulting from noncompliance with coal program requirements are eliminated.

5. Lessees could continue holding most nonproducing leases as an inventory to meet potential increases in future demand until diligence provisions might be enforced.

6. Lease readjustment to include the 1982 diligent production requirements (assuming it is timely and effective) and subsequent enforcement will gradually force old leases to begin producing or be terminated in the mid-to late-1990s.

7. The overhang of old lease reserves could dampen demand for additional large scale leasing in many areas and would allow the coal management program to resume leasing at low levels and to devote more time, and resources to tract evaluation and environmental review for the few lands that are leased.

Disadvantages:

1. Repeal would be interpreted as congressional approval of 1982 changes in diligence requirements for existing leases and as a reversal of the FCLAA policies against nonproductive holding of old leases, particularly by large energy companies and conglomerates.

2. Repeal effectively would remove last reform of the mid-1970s aimed at a resolution of the overhang of nonproducing old leases.

3. Action on section 3 relief does not aid new and readjusted leases with 10-year diligent production deadlines. Pressure for legislative relief from these provisions would continue. Other critics of the leasing program would press for legislative action to deal with old leases because simple repeal of section 3 does not address the problems with arguably inadequate diligence provisions and enforcement mechanisms for existing nonproducing leases.

4. Repeal would eliminate an early opportunity to bring more old leases under the production requirements of FCLAA and 1982 diligence system by requiring modification of lease terms as a condition of LMU approval to comply with section 3.

5. Repeal would preserve until the 1990s and beyond the competitive advantage of old leases carrying minimal royalty and production requirements and few, if any, discretionary environmental protection stipulations.

6. Repeal would be viewed by some as "rewarding" noncomplying, nonproducing lessees over lessees that brought leases into production or sold or relinquished nonproducing leases in anticipation of section 3 enforcement.

Option 3:

Limit Section 3 to Issuance of Coal Leases.

Section 3 would be amended to provide that the Secretary shall not issue a *coal* lease to a noncomplying lessee or any related entities.[2] This option would eliminate the impacts on oil and gas and other mineral leases, but would retain many of the other advantages and disadvantages of option 1. Limiting section 3 to coal leases substantially undercuts the effectiveness of the provision as an incentive for the few major lessees with many nonproducing leases to develop, sell or relinquish their noncomplying leases if the threat to the companies oil and gas operations are removed. Disqualification would then have very little impact unless the noncomplying lessee needed more coal for an existing mine (in excess of the 160 acres per lease available through noncompetitive lease modification.)

Advantages:

1. Limiting the provision to coal leases only removes the harsh noncoal impacts of section 3 penalties while still preserving the basic policy that coal leases are to be held for timely production.

2. Nonproducing coal lessees continue under the section 3 penalty, but other mineral operations are exempted. This provides full relief for some, but not all of the noncomplying lessees.

3. The nonproduction penalty is tied more directly tied to the activity that is being punished by the limitation to coal leases.

Disadvantages:

1. The limitation would effectively remove the force of section 3 as a tool for promoting development or divestiture of old nonproducing leases by many large leaseholders.

2. Option would not provide relief for a coal lessee that has not yet produced commercial quantities of 1 percent of reserves from a mine that is under development, if the lessee needs additional reserves for other mines during disqualification.

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[2] A variation of this option would be to limit section 3 to the issuance of competitive coal leases. This alternate option would have all the same advantages and disadvantages of the coal only option, however it would allow the issuance of pending preference right lease applications if the required showings were made entitling the lessee to a noncompetitive coal lease.

3. A larger group of lessees would be unaffected by section 3 than under option 1. Nonproducing lessees with large amounts of reserves might remain unaffected for years, if at all, because they would not need to acquire any additional coal reserves in order to compete for new contracts.

4. Companies that prepared to comply with section 3 by divestiture of nonproducing leases would complain of unfairness and competitive disadvantage. The companies would argue that noncomplying leaseholders had been "rewarded" by waiting.

Option 4:

Extend the Time to Comply with Section 3.

There are two ways to extend the section 3 production deadlines. One approach would be to modify section 3 to lengthen the 10-year section 3 holding period, for example by two or five years, giving the lessees more time to bring leases into production. As reported from committee section 3 originally provided 15 years for a lease to go into production but this was shortened by a floor amendment. In the alternative, a noncomplying lessee might be given an extension if some progress toward development were demonstrated, such as, for example, a substantial investment in mine construction and development, or execution of a contract for delivery of coal from the mine. An extension would delay disqualification and would allow lessees even more time to find buyers, develop mines, produce enough to satisfy the commercial quantities test, or to stockpile coal reserves and other leases against eventual application of section 3. An extension might delay and diminish the effects of eventual section 3 enforcement. The conditional extension would be similar to option 5 which expands exceptions to the producing in commercial quantities requirement, but lease would still have to be producing at end of any extended period.

Advantages:

1. Extension delays imposition of the penalty while giving Congress and the Department more time to consider changes to section 3 and diligence provisions of coal leasing laws.

2. Extension would provide relief from the immediate impacts of section 3 enforcement in 1986 while maintaining the principle that Federal leases are to be held for development.

3. An extension would shift the section 3 penalty impacts forward in time to begin to coincide with the end of diligent development periods under the Department's 1982 diligence policy for readjusted leases.

4. A conditional extension could provide some additional flexibility in compliance for a mine close to commercial operations or that had not yet produced coal in commercial quantities. Such extensions would be discretionary with the Secretary and based on a finding that the lessee has demonstrated reasonable efforts at developing the lease. The lessee would still be faced with a production deadline.

Disadvantages:

1. Delay merely prolongs the eventual penalty for many leaseholders if a short extension is used. Current market conditions in some areas show little prospect of substantially increased demand for coal.

2. Extension would be similar to repeal in that it would effectively remove perhaps the last remaining mechanism adopted in the mid-1970s to force development or divestiture of old leases that had been held without production. Extensions of five years or more would defer the impacts into the 1990s on leases that already have been held idle for 10 to 20 years or more.

3. Pressure for legislative relief from section 3 would continue, although it might abate somewhat during initial period of extension.

4. Public and industry confidence in the Department's administration of any provision for discretionary extensions may be low. Unless the coal management program and its image are dramatically altered, any conditional extensions would be subject to criticism that they were the results of political pressure, or favoritism. The Fair Market Value Commission (2 members) recommended against discretionary extensions of the 10-year diligence period for this reason.

5. Review of requests for discretionary extensions would place additional administrative burdens on the Department given the large number of leases involved.

Option 5:

Modify the Producing in Commercial Quantities Requirement to Allow Additional Exceptions.

This option would preserve section 3, but address the concerns of producing lessees or lessees who have made significant investments and progress in bringing leases into production. This option would allow an exception to section 3 for a lessee who demonstrated that it achieved one or more milestones in mine development. These milestones might include a minimum investment in equipment and facilities, mine plan development and permitting, or a contract for sale of coal from the mine. Milestones can be a range of actions that provide demonstrable evidence of lessee commitments and investment in development of the lease. However, mine plans have been submitted and construction commenced on mines that do not operate at capacity or that were later closed because of poor market conditions. The key in setting effective milestone is when the decision to commit resources for compliance must be made. The later in a lease term that a milestone must be achieved, the more costly the provision reasonably should be. These types of diligence and production requirements do not guarantee the success of the venture, but only that lessee has made efforts to generate revenues for lessor thus fulfilling the supposed intent of parties.

This option could also legislatively "correct" the Department's restrictive definition of producing in commercial quantities and its conclusions concerning the availability of exceptions. In making such an amendment, commercial quantities might be defined as 1 percent of lease reserves. Some lessees would like to see this regulatory definition locked into law because they view it as the most favorable interpretation they would be likely to get. Other lessees, although agreeing that such a definition of commercial quantities is lenient, oppose any definition that sets an inflexible production goal without some allowance for the normal uncertainties in mine construction and operation. A large operation in its early years may find it difficult to satisfy a one percent production level and would look for alternative ways to demonstrate its commercial operation.

Advantages:

1. Option 4 provides additional flexibility in meeting the producing in commercial quantities requirement and thus could relieve lessees who are producing or are almost producing from a potential penalty for noncompliance.

2. The distinction is preserved between operators that are producing or actively developing a mine and those that are not. The section 3 penalty is maintained for the "undiligent" lessees.

3. Additional exceptions for nonproducing leases could obviate the need for LMU approvals for section 3 compliance for many mines.

Disadvantages:

1. Expanding exceptions to section 3 could be viewed by as weakening section 3 (and section 7 diligence provisions) if what is required to qualify is so minimal as to be viewed as frivolous. Because of the reduced public confidence in the coal leasing program, vesting extensive discretion in the Department to grant exceptions could continue the suspicion and controversy over coal lease management decisions.

2. The option provides little relief for lessees with many undeveloped leases, even though they may have one or more producing mines, or for leases with some leases are in later stages of development.

3. The substantial investment and supply contract exceptions would involve the Department in reviewing financial arrangements and contractual terms of lessees. The Department may not have enough competent professionals to perform these tasks adequately.

4. Granting too many exceptions would nullify section 3's effectiveness.

5. Early opportunities for applying 1982 diligence regulations and FCLAA requirements for existing leases on LMU approval would be reduced.

Option 6:

Make the Section 3 Producing in Commercial Quantities Requirement Applicable to All Pre-FCLAA Leases in 1986.

Under this option section 3 would be amended to remove the 10-year holding period before the producing in commercial quantities requirement applied. The section 3 penalty would attach to leases and not to leaseholders. Congress would amend section 3 to remove the "holds and has held a lease.. for ten years" language making the restriction applicable to any lessee who holds a lease that is not producing after, for example, August 4, 1986. An example of such a provision would be:

> After August 4, 1986, the Secretary shall not issue a lease under the provisions of this act to any lessee which holds a noncompliance lease. As used in this section, lessee means any person, association, corporation or other entity that holds actual or beneficial title to a Federal coal lease and any association, subsidiary, affiliate, or other entity that controls or is controlled by or is under common control with

such lessee. Noncompliance lease means a Federal coal lease that has been in effect for ten or more years and which is not, except as provided for in section 7(b) of this act, producing coal in commercial quantities."

Such an amendment would indisputably expand the section 3 sanction to all nonproducing pre-FCLAA leases. (It is assumed that Congress would not use language that would apply this requirement to post-FCLAA leases or to exchange leases that have pre-FCLAA effective dates during the first 10 years of their terms.)

The action avoids any constitutional or contractual issues since it restricts the authority of the Secretary of the Interior and limits the entities that can acquire new leases which are property rights that have not yet been created.

Advantages:

1. This option provides an additional penalty for all old nonproducing leases that, unlike the diligent development requirements, is independent of any lease terms, regulations, or discretionary enforcement decisions.

2. No section 3 relief is provided. This Congressional action would be seen as reaffirming and strengthening penalties for nonproduction independent of diligence enforcement by DOI.

3. The obligation to bring a lease into production could not be avoided by assignment. The section 3 production obligation would more closely track lease diligence obligation; the development clock would not be restarted with a change in owner.

4. This option would relieve some of administrative burden on the Department in tracking ownership changes since the producing status of a lease can be readily determined.

5. This provision limits in part the effect of the Department's 1982 rules changes for some classes of leaseholders without affecting the terms of old or readjusted leases.

6. Lessees could still retain old leases under the same terms as previously, but could not get new leases.

Disadvantages:

1. This option magnifies the impacts of section 3 enforcement, all nonproducing old leases would be affected.

2. Pressure for legislative relief would continue.

3. This change would disrupt the expectations of assignees who acquired old leases after 1976 assuming that they would have 10 years before disqualification was imposed. The unfairness issue would be raised.

4. The compliance status of all lease applicants would still have to be determined before issuing coal or other mineral leases and a larger number of leases would be initially affected.

5. This option would make nonproducing leases less marketable and more likely to be relinquished and would make it less likely that leases would move into the hands of those who would mine them more quickly than their current owners.

6. Major coal producers and oil and gas companies and their affiliates would be pressured to produce or give up their coal leases.

7. Lack of flexibility in defining producing in commercial quantities could have same harsh consequences for some lessees as section 3 as it is now.

8. No additional relief is provided from section 3 penalties.

9. Administrative burdens on the Department to approve LMU formations, lease assignments, suspensions, and relinquishments would be increased because all lessees seeking such relief to avoid a section 3 penalty would be applying and expecting necessary action before the same deadline.

10. Lessees that have no immediate need for additional coal leases and that are not active in other mineral leasing areas would be relatively unaffected and could continue to hold old nonproducing lease until diligence provisions might be enforced.

Options, 7, 8, 9 and 10:

Adopt New Exceptions to Section 3

Options 7, 8, 9, and 10 would keep and enforce section 3 but allow nonproducing leaseholders the opportunity to qualify for additional leases. These approaches would add some flexibility to the administration of section 3. These options include:

Option 7: Addition of a qualifying payment requirement for noncomplying lessees through voluntary modification of lease terms.

Option 8: Requiring noncomplying lessees to pay a surcharge on any new coal leases.

Option 9: Requiring noncomplying lessees to relinquish equivalent amounts of noncomplying leased acres or reserves to qualify for new leases, also known as the "lease turnback" approach.

Option 10: Allowing noncomplying lessees to relinquish old nonproducing leases in exchange for a preferential option to purchase a new lease on the same lands if it survives the new lease screening process. This is also known as the "Lease Rollover" option.

For various reasons, many of these changes could most easily be implemented as legislative exceptions to section 3. Because of the uncertainty and controversy over the extent to which Congress can alter the financial obligations of Federal leases before the current lease term expires, it is probably more practicable to implement the Option 7 payment provisions as a voluntary election by the lessee thus avoiding the legal issues.[3] The Department took a similar approach in requiring the amendment of pre-FCLAA leases to include the 1982 regulatory diligence system as a precondition for LMU approval. The other options do not involve similar contractual issues because the existing leases are unaffected and the lessee would need to negotiate with the Department only for a new lease that the Department is under no obligation to grant. The noncomplying lessee would not be forced to relinquish any leases. Any lessee who wishes to endure disqualification and forego additional leases is under no obligation to use any of the available exceptions.

OTA has assumed here that these provisions would be in addition to any diligence requirements or production incentives imposed in section 7. OTA has also assumed that they would apply to post-FCLAA leases that were not terminated for nonproduction after 10 years. For some of these options we have added an additional condition requiring that the option must be elected within a specified election period (e.g., by August 4, 1986) whether or not a new lease is sought at that time. Lessees who did not elect the exception would not be able to take future advantage of the relief provision. (This approach is particularly important for the holding fee option so that revenues would accrue from the date of noncompliance.)

These exceptions would allow noncomplying lessees with many nonproducing leases to take maintain their reserves position, but at a cost. Because a few major lessees hold a large portion of the noncomplying leases, Congress may wish to consider adding further qualifications for these exceptions. For example S. 382 limits the availability of an option to lessees with no more than two noncomplying leases. There is some inherent regional inequity in conditioning an exception on the number of leases held. A viable mining property might consist of one lease or eight (or more) depending on the peculiar history of the leases and the State or region in which they are located. Consider, for example, two hypothetical coal mines under development but which are not yet under contract or being mined. Lessee A in the Powder River basin has one lease, which like many leases in the Powder River basin of Wyoming issued in the late 1960s and early 1970s is very large (over 2000 acres) and contains several hundred million tons of reserves -- enough to sustain a large surface mine for many years. Lessee B has a mine under development in Central Utah that consists of five leases, the smallest 80 acres and the largest 2200 acres, and reserves that would sustain a large underground mine for 40 years. For geological and engineering reasons, the Utah leases would be mined in sequence over many years. The Powder River nonproducing lessee would not be much affected by a qualification that limited availability of an option to those lessees with two or fewer leases, while the Utah lessee B would be faced with the prospect of disqualification or, perhaps irreversibly, dismantling a minable property through assignment or relinquishment. The Utah lessee B might try to have the leases consolidated into two leases to qualify for the exception, but it is not certain that the Department would approve such a request. The two lessees are arguably in similar positions with respect to compliance with section 3, but they would not be equally helped by relief conditioned on the number of nonproducing leases that they hold. Limiting an exception to any lessee with no more than two noncomplying leases *or* one noncomplying logical mining unit including any number of qualifying leases would treat both lessees more equitably.

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[3] By noting the existence of such objections to direct modification of lease obligations, we are not suggesting that Congress cannot lawfully alter existing leases, including payment obligations, before expiration of the current lease terms without impermissibly abrogating contract rights or incurring an obligation to compensate the lessee. We have not researched the precedent for such legislation. However it is arguable such action might be sustained by the courts if Congress was asserting its constitutional authority over disposition of the public lands and correcting what it perceived as errors or abuses of discretion on the part of the Secretary in the administration of his responsibilities which resulted in detriment to the public interest and unjust enrichment of lessees. Lessees have an obligation to develop leases diligently and to pay for use of public resources, the Secretary cannot relieve them of that responsibility either directly or through inaction or inadvertence. The past history of disregard of the MLA's statutory diligence requirements by the Department and lessees may be one circumstance where, direct Congressional action would be sustained. Congress might be more successful and on firmer legal ground in enacting legislation that terminates nonproducing leases by operation of law for failure to satisfy the diligence obligation within a reasonable period of time. The Supreme Court recently sustained a provision of the Federal Land Policy and Management Act of 1976 creating a presumptive abandonment and forfeiture of mining claims for failure to file annual assessment reports on time. See U.S. v. Locke, ___U.S.___, No.83-1394, Apr. 1, 1985. See also these legal memoranda by the American Law Division of the Congressional Research Service, Library of Congress: "Constitutional Issues Raised by Proposal to Impose New Obligations upon Leaseholders on the Outer Continental Shelf", Jan. 23, 1980: "Legal Analysis of Legislative Cancellation of Existing Oil and Gas Leases", Mar. 20, 1980; and "The Federal Coal Leasing Amendments Act of 1976 and 'Diligent Development' Requirements", Mar. 1,1982.

OPTION 7:

Payment of Holding Fees on Nonproducing Leases as a Qualification for Additional New Leases.

Under this option a lessee would make annual payments on all noncomplying leases in order to qualify for new leases. The lease terms would be modified to include an annual payment for nonproducing leases. This obligation would run with the lease and would transfer to the new owner if the lease were assigned. The payments would begin on August 4, 1986 for most nonproducing pre-FCLAA leases and would cease when the lease was brought into compliance with section 3 (or relinquished). The payments would begin 10 years after lease issuance for all other coal leases. The lessee would have a limited period in which to elect to have the lease modified to qualify for new leases. Lessees who did not make an election by the end of the period would not be allowed to use this mechanism to avoid section 3. Leases that were not modified to contain the section 3 nonproduction payment could be made subject to a similar nonproduction payment on the next readjustment date. To create an incentive to make an early election, these nonproduction payments incurred on readjustment could not be used by the current lessee to avoid section 3 disqualification. The payment scheme could allow a partial credit for any production that occurs in that year to assist lessees who are producing but have not yet reached the commercial quantities threshold.

One way of implementing such an approach would be to amend section 3 so that the Secretary may (or shall) accept annual payments in lieu of producing in commercial quantities if the lessee agrees to modify the lease to include such a provision by August 4, 1986 or 10 years after lease issuance, whichever is later.[3] By conditioning the availability of this relief on the lessee's election to be governed by its terms, the legislation does not amend existing leases without the consent of the lessee. Any lessee who chooses to be subject to the section 3 disqualification in the future is free to do so. Setting an immediate time limit on the availability of the election forces an early decision by the lessee about a commitment to develop and provides some certainty that a section 3 disqualification can be avoided. One might also partially address problem of old leases that were not readjusted to conform the FCLAA by making such readjustment a further condition of section 3 relief. The payment election also assures an early stream of revenues to government.

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[3] An example of this formulation might provide:

> The disqualification provisions of section 3 shall not apply if qualifying payments in the amount of (insert basis for payment) are made in lieu of production in commercial quantities. A lessee may elect to amend the lease terms to include a qualifying payments provision by notifying the Secretary in writing by August 4, 1986 (or alternatively before the end of his ten year holding period). All such elections shall be approved by the Secretary but the effective date of the election shall be the date on which it was filed. Within 60 days of the date of enactment of this act, the Secretary shall propose regulations specifying the information required to be filed for an election. and one might also partially address problem of old leases that were not readjusted to conform to FCLAA by making such readjustment a further condition of section 3 relief.

For purposes of this discussion, OTA assumes that the annual payment requirement is similar to a delay rental and is initially paid for the privilege of maintaining one's qualification for new leases. A relatively simple payment formula should be used since it is expected that many lessees would seek to comply. A flat cents per ton or dollars per acre payment would probably provide the most predictability for lessees and be the easiest to administer, despite some of the inherent inequities in any such uniform approach. The payments should be substantial enough to affect the economics of holding the property without production. OTA's review of various holding fees suggests that an annual payment of 1 cent or more per ton of recoverable reserves under lease would begin to have a measurable impact in almost all regions. (See Chapter 4.) The fee is still less than would be paid in royalties if the lease were producing even at the pre-FCLAA royalty rate of 20 cents per ton and is significantly less than what a lessee would probably have to pay for a new lease with marketable coal.

This payment option is similar in effect to the proposals for advance royalties or delay rental in lieu of production after 10 years under section 7. However here it is primarily viewed as supplementary to the production-forcing provisions of section 7. (If additional payments were relied upon to spur production or relinquishment of existing lease or to provide a stream of royalty income in lieu of production in the absence of any section 3 requirements, one would expect that the such payments would have to be higher than those extracted as a qualification for new leases under section 3, although there is no economic requirement that it be so.)

One might also use the option to correct some of the problems with tardy or ineffective lease readjustments by limiting the availability of the payment option to leases that have been readjusted or modified to contain the post-FCLAA terms on royalties, diligence, and other requirements.[4] This will also help to overcome the advantage gained by some lessees as the result of the Department's failure to conform the leases to the new terms by timely and effective readjustments. These unadjusted leases will be required to be made subject to higher royalties and the 1982 diligence requirements as a further condition for avoiding section 3.

Advantages:

1. A qualifying payment would provide some relief from section 3 by allowing all noncomplying lessees to pay to keep a nonproducing lease to avoid the section 3 disqualification.

2. The payment option makes the decision of whether to keep a lease or acquire a new one an economic choice for lessee. Such an approach would be more in keeping with private sector practices than the current section 3.

3. Some view the payment option as essentially neutral with respect to different classes of lessees by making it an economic decision.

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[4] Such a condition might provide, for example, that such election shall not be granted for to any lessee or parent or affiliate, etc., that holds any lease issued (or with an effective date) before August 4, 1976 which was subject to readjustment after August 4, 1986 and has not been so adjusted to conform to the requirements of post-FCLAA diligence and continued operations provisions, unless the lessee consents to amend the lease to include all terms and conditions required by FCLAA, and the lease form and regulations that were or are in force at the first 20-year anniversary date of the lease after August 4, 1986.

4. This option allows section 3 to apply to issuance of all onshore mineral leases, thus keeping the pressure on nonproducing coal lessees with noncoal leasing operations, particularly oil and gas companies. The penalties for nonproducing coal leases are incurred by coal lessee and not by the noncoal resource divisions or affiliates. (That is assuming that the coal division will pay (or be forced to pay) for the ability of the other divisions or affiliates to obtain noncoal leases.

5. The payment option offers relief primarily to coal lessees who are actively involved in coal and other leasing activities. Individuals, and other passive lease-holding companies would be probably be unlikely to elect payments unless they were seeking more leases.

6. The payment would generate some revenues for the States and the Federal Government in the absence of production royalties. (OTA assumes that the payments would be subject to the MLA's revenue distribution scheme.)

7. Additional payments would increase the lessee's financial stake in the lease, thus making later relinquishment, termination, cancellation through eventual enforcement of diligence requirements a greater economic penalty. This might tend to provide an additional incentive to make an earlier decision about developing the lease than under the 1982 diligence system.

8. Substantial payments may make some old leases uneconomic to mine. (It is arguable that many such leases probably are noncompetitive even without such payments. In such cases the lessee would (if he has any sense) relinquish the lease. If the lease has not yet been reclaimed, it might force the lessee to take the necessary actions to restore the surface so that the lease may be relinquished.)

9. Substantial payments should force lessees to reevaluate their reserves holdings and get rid of those leases not likely to be mined. This weeding out of leases with poor development potential might generally improve the quality of the reserves under lease, while reducing the amount of such inventory. The reduction in the lease reserves "overhang" might make it easier politically to justify additional new leasing.

10. A continuing payment obligation that ran with the nonproducing lease might diminish the resale value of old leases because of the future payments that the purchaser must make to the Federal government. The government, rather than the nonproducing leaseholder would, however, at least receive a share of any resale value of the reserves.

Disadvantages:

1. The payment option continues to tie noncoal operations to the actions of coal lessee affiliates as a mechanism to force production, but unlike the current section 3, it does allow escape, assuming the coal lessee will pay to avoid corporate disqualification.

2. This option may impose administrative problems on the Department in determining the payments for each lease if it is not a flat dollar per acre or cents per ton rate, but rather an ad valorem calculation tied to the lease reserves, production rate and regional selling price of coal. Lessees also would have an increased burden in providing the necessary information for calculating the payment, but presumably they would be willing to incur it to avoid disqualification.

3. The economic impacts of this option are greatest on lessees with large acreages and reserves and little production. They could face substantial payments if the nonproduction fee were set high and they wished to keep all or most of their nonproducing leases.

4. High payments might make some tracts less economic to mine. Payments increase the lessee's stake in lease and may make later relinquishment or diligence enforcement more costly and lead to renewed efforts for changes in lease diligence provisions.

5. Payments might increase the compensable value of leases that might later be exchanged for environmental or other reasons. (Although DOI has not tended to base such transactions on how much the lessee paid the Government for the lease rights but on the value of the coal in place.)

6. Large corporate lessees could continue to hold reserves and maintain their dominant reserves position through payments. Modest qualifications payments are unlikely to alter the concentration of holdings by these lessees. A high payment would be a disincentive for them to continue to hold nonproducing reserves.

7. Lessees that have already turned back or traded potentially noncomplying leases might argue that the option is unfair because they did not have opportunity to pay to keep their lease qualification status and their inventory of leased reserves.

8. Not all nonproducing lessees would elect to make qualifications payments, but similar annual nonproduction payments requirements could be imposed at the next lease readjustment.

Option 8:

Surcharge on New Leases

Under this option, a lessee would make an additional payment on any new MLA leases obtained while under disqualification. The provisions of the noncomplying leases would be unchanged. This qualification surcharge would be in addition to payment of a fair market value bonus, rentals, and royalties on the new lease. This option could theoretically work while continuing the section 3 applicability to all MLA leases, however, structuring of an appropriate surcharge for oil, gas and other minerals on anything other than an acreage basis would appear to be a complicated process. Because the payment is applicable to the new lease, a payment obligation would not arise until and unless a new lease is sought. The payment obligation would end when the lessee is no longer in noncompliance because the old leases are producing, transferred or relinquished. One consequence that must be considered is the possibility that the lessee may initially agree to the surcharge and win the competitive bidding for a new coal lease and then later petition for a royalty reduction on the grounds that the surcharge make the operation of the new lease uneconomic under its terms. If a later royalty reduction were granted, the surcharge effect might be reduced to only a nominal level.

Advantages:

1. The section 3 penalty is maintained, but the noncomplying lessee can escape disqualification by paying more for new leases.

2. The surcharge is conditioned on and applicable to acquisition of new leases, no economic penalty is applied to the old nonproducing lease.

3. The payment obligation extends to any new lease. Depending on how the surcharge is structured, this approach may be less costly than Option 7 holding fees for a noncomplying lessee with many noncomplying leases if only a few additional coal leases are needed.

4. The additional payment requirement could place a noncomplying lessee at a disadvantage with complying lessees in competitive lease bidding, since the surcharge would be added to other lease payments.

5. The surcharge option could require qualifying payments for the issuance of new preference right coal leases that might otherwise be issued without any initial payment obligation.

6. This option assists all lessees interested in acquiring new leases while under section 3 disqualification.

Disadvantages:

1. This option is easiest to administer if section 3 is limited to new coal leases only, however, much of incentive to produce on old leases is lost.

2. If the noncomplying lessee has little need for additional coal, this option is unlikely to generate much revenue and will have little impact on nonproducing leases.

3. The royalty reduction authority for coal leases might allow the lessee to escape full impact of the payment requirement for lease, if the Secretary later lowers production royalties to offset the economic impacts of the surcharge.

Option 9:

Lease Turnback

Under this option and its variations, a lessee would agree to relinquish an equivalent amount of noncomplying coal acreage or reserves as a precondition for acquiring a new lease. The turnback might be on an acre-for-acre or ton-for-ton basis or based on some formula adjusted for regional differences in the quality and value of the coal. The relinquishment requirement would be in addition to payment of fair market value for the new leases.

A turnback is not an exchange, but could have many of the administrative problems and controversies that have plagued lease exchanges in determining the equivalence of reserves between different tracts. Because of this aspect, many have advocated that a straight ton-for-ton formula or some variation be used, and that it not be based on the coal quality or fair market value of the coal in place. Acreage-based tradeins also would be straightforward but regional equity issues would be raised. For example, there is generally more coal per acre in the Powder River basin than in the Fort Union or Uinta Regions. A relinquished Fort Union Tract might be considerably less valuable than one of similar size in the Powder River basin.

Among the problems that can be anticipated in establishing equivalence for turnbacks include:

o Setting a monetary value or other equivalency basis for coal from different regions (This could be dealt with administratively or legislatively by establishing a schedule of values for different regions.);

o Determining the adequacy of geologic information to be used to determine the amount of reserves for tradein equivalence (This problem exists for all reserves based options.); and

o The administrative time and resources required to conduct the necessary analyses of tracts to be relinquished.

A lease turnback approach might provide create a secondary market in nonproducing leases with poor development potential that might otherwise be relinquished early. The low development potential tracts could be used to qualify for new leases through turnbacks while protecting other tracts with high development potential. The Department policy limiting assignments to noncomplying lessees could limit this potential somewhat.

Companies with a few high development potential leases within development delays would not be helped by the turnback option. They and their affiliates would be disqualified and would be faced with giving up all or part of mines that were very near or in production. If the turnback were paired with a qualification payment option, companies with many noncomplying leases could avoid payments while companies with only a few noncomplying leases might actually have to pay more for new leases. This would tend to reward noncompliance.

Lessees who had already turned in nonproducing leases and still had minor problems with compliance would complain of the unfairness of allowing competitors to preserve their dominant reserves position, even with payment or additional conditions.

This option only works well if section 3 is limited to coal leases only and thus also carries the advantages and disadvantages of Option 3. Attempts to apply this option to qualifications for other mineral leases are not likely to be very successful since they would require establishing a monetary value as a basis for equivalence. The initial amounts paid for most onshore oil and gas leases are relatively low, so not much coal would be turned in as equivalent value. Moreover, the Department has experienced difficulties in assessing the value of both coal and oil and gas tracts for competitive bidding purposes. The additional burdens in determining an equivalent monetary value for turnback purposes would only add to the difficulty and controversy attendant on these determinations.

Turnback provides some relief from section 3 disqualification. The lessee could continue to hold any nonproducing leases in excess of those needed to qualify for new leases.

Advantages:

1. The turnback option provides some relief from section 3 for companies desiring new coal leases that have large amounts of noncomplying leases or reserves.

2. A nonproducing lessee can acquire more leases but cannot enhance its reserve position except, perhaps, to improve the quality of coal in its inventory with more marketable coal.

3. Turnback creates a more orderly, phased mechanism for the relinquishment of leases with little development potential than under the current approach because lessees would keep noncomplying leases until new leases were needed instead of relinquishing them all before August 4, 1986 or the applicable section 3 date.

4. Turnback creates an additional incentive to relinquish old leases rather than assign them to any available purchaser if the lessee wants more Federal coal.

5. Leases most likely to be turned back first are those with poor development potential or where mine development is likely to be controversial or difficult for environmental reasons.

6. As under existing law, lessees would not have to give up any leases unless they wished to acquire new leases.

Disadvantages:

1. The turnback option would only be workable if section 3 were limited to coal leases only. Lifting of its applicability to other minerals would remove the most effective incentive for most of the major noncomplying leaseholders to turn back their old leases.

2. Leases most likely to be turned back under this option are the least marketable coal properties under lease, i.e. those with poor development potential and or serious environmental conflicts, and also are the leases most likely to be relinquished under other options

3. Turnback creates an incentive to keep or trade leases that might otherwise be relinquished.

4. The turnback option is most favorable to lessees with either large numbers of leases or large reserves that are not in compliance with section 3.

5. Turnback imposes additional administrative burdens on the Department in reviewing tracts for equivalence in addition to determining the appropriateness of tract for relinquishment. Difficulties and controversies can be expected to be similar to those encountered in exchanges.

Option 10:

Relinquishment and Reissuance of Noncomplying Leases or Lease Rollover

Under this option, a noncomplying lessee could avoid section 3 by entering into a special relinquishment agreement with the Secretary. The lessee would agree to relinquish all of its noncomplying old leases in exchange for section 3 relief and a noncompetitive preferential right to purchase a new post-FCLAA lease for the same lands when and if the relinquished lands pass the new lease screening process.

The lessee would have to comply with all relinquishment conditions under current law and regulations. The relinquishment must be unconditional. The section 3 disqualification would be lifted on approval of the special relinquishment agreement. The relinquished lease areas would then be subject to the complete land use planning, environmental screening, surface owner consent, and tract evaluation process for new leases. Any new leases would contain the post-FCLAA royalty and diligence provisions. If the tracts are reoffered, the lessee would have a noncompetitive or preferential right to acquire the tracts on payment of a fair market value bonus. Some credit might be allowed for any prior bonus payment.

This option could improve the quality of the inventory of leased reserves. It is likely that the better quality tracts would survive this process and still be economically attractive prospects. The lessees would be assured of reobtaining the leases that survived the screening, and any investments in surface rights, environmental baseline studies, reserves assessment, and engineering and mine design studies might be preserved. Areas that were environmentally unsuitable could be eliminated, areas that were environmentally sensitive would be identified so that protective lease stipulations could be developed to address such concerns during mining. The review period would not be chargeable against the new lease's primary term or initial diligence period.

This option surfaced in informal discussions among DOI, congressional staff, conservation groups, and oil and gas company lessees. It would require legislative authorization because it involves granting future preferential lease rights or options to section 3 leaseholders in exchange for lease relinquishments. Such transactions are not now possible because of the requirement that all new coal leases be offered by competitive bidding. Legislation would have to allow the government to grant the lessee the option of reacquiring the old leases. Legislation would also give the lessee the security that the Department could honor its agreement. It would be important for the success of this option to avoid creating any right to compensation or exchanges for leased areas that did not survive the screening process. However, since submittal of leases to this process would be voluntary, there need be no legal requirement to compensate for lands that may legally be prevented from mining anyway or for terms that could be imposed on readjustment. The major benefit to the lessee would be eligibility for additional coal and noncoal leasing and an option to purchase new lease on the relinquished lands should the Department reoffer them. The agreement could specify that a decision on lease review and reissuance must be accomplished within a certain period of time. Legislation might require the lessee to pay any administrative costs associated with the requalification process to defray the cost impacts on the Department. Such purely administrative fees would not be credited against payment of fair market value, and would not be revenues that must be shared with the States.

Advantages:

1. The rollover option provides relief from section 3 and addresses many environmental and other concerns about letting old nonproducing leases continue in effect beyond 1986.

2. Old leases are converted into post-FCLAA leases with post-FCLAA environmental, financial, surface owner consent, and production requirements.

3. Rollover would have the same effect as an early lease readjustment for imposition of discretionary environmental protection and socioeconomic impact stipulations. Areas that would be unsuitable or environmentally difficult to mine and reclaim would be identified and unsuitability designations or protective stipulations applied.

4. Valuable tracts would likely survive the review process. A lessee who acquired the tract initially at a low price would probably still have an incentive to hold on to it longer, assuming that payment of fair market value did not wipe out all of the tract's profitability. The government would receive a fair return on the tract.

5. For multi-lease tracts with different diligence deadlines, relinquishment and conversion into new leases would allow the tract to be maintained intact and perhaps receive an extended diligence period.

6. Leases with little near term chance of development would probably not be reissued if costs of maintaining or of reprocessing were high enough and the current 10-year post-FCLAA diligent production requirements were kept.

Disadvantages:

1. Only lessees with valuable tracts they wish to keep and no other options would elect this exception. Many lessees with old leases would do nothing, or relinquish or sell their leases.

2. Converting old leases into post-FCLAA leases without significantly favorable trade offs in addition to section 3 relief, such as a longer diligence period, might be too disadvantageous for some lessees.

3. Rollover would not help a lessee with only a few nonproducing leases that were close to commercial production if there were no other section 3 relief available. The time necessary to review and reoffer relinquished leases could delay opening of the mine for several years possibly resulting in loss of market opportunities.

4. A preferential right to reacquire relinquished lease areas as new leases might bring less bonus revenue than resale of the leases by competitive bidding if other companies are interested in acquiring the reserves.

5. The Department might reissue leases with environmental conflicts identified during the lease review in an effort to avoid litigation and defer a decision over minability of tract to mine plan permitting. Later, the Department might needlessly be faced with the pressure to seek an exchange of the unminable new leases for valuable Federal coal leases elsewhere.

Section 3 Options and Modification of Section 7 Diligence Requirements

The options discussed above were primarily designed as alternatives for the section 3 producing in commercial quantities requirement under existing law. OTA notes that several section 3 options also are similar to suggested reforms for the section 7 diligent development and continued operations requirements and most specifically the 10-year diligence period for new leases imposed by statute, and by regulation for readjusted leases. These options are: extensions (Option 4); use of alternative lease development milestones (Option 5); and payment of holding fees in lieu of production (Option 7). Under certain unusual circumstances the lease rollover option might also be an alternative for extending the 10-year diligence period.

Many of the advantages and disadvantages of these approaches as modifications to the diligence provisions are similar, but the underlying policy question is different. Section 3 was originally an adjunct to the basic diligence requirements. As a result of administrative policy changes, section 3 is now the major production requirement for most old leases. Modifications to section 7 involve direct alteration of a fundamental policy of Federal coal leasing. Without some form of diligence requirement, private interests could tie up Federal coal reserves indefinitely without production while remaining eligible to compete for even more Federal coal. A dynamic Federal leasing system that strove to offer Federal coal leases to create opportunities to the private sector to compete for coal supply contracts and thus keep fuel costs low for consumers is highly dependent on a diligence mechanism. Without some means of returning undeveloped tracts to the system, the government might soon exhaust its supply of marketable tracts and lose its ability to affect the price or supply of coal to consumers.

APPENDIX A

BACKGROUND: FEDERAL COAL LEASE OWNERSHIP AND SECTION 3 COMPLIANCE STATUS BY INDUSTRY

METHODOLOGY AND INFORMATION SOURCES

OTA's analysis of coal lease ownership and section 3 compliance status is based on the information assembled for our 1981 report, *An Assessment of Development and Production Potential of Federal Coal Leases*. Since publication of that report, OTA's coal lease data and conclusions have been updated periodically using information from the Department of the Interior, State agencies, coal lessees, coal-industry trade publications, and other sources. Aggregate information was generated from OTA's computerized coal lease data base which was created for this special report.

Coal lease ownership data for 1975 and 1980 were obtained from the 1981 OTA technical memorandum, *Patterns and Trends in Federal Coal Lease Ownership 1950-80*. The 1984 ownership information was assembled by OTA for this project. Corporate relationships for parent corporations, subsidiaries, and joint ventures were obtained from the lessee qualifications statements filed by lessees. Where that information was not sufficient, OTA consulted industry manuals and trade magazines, and contacted State corporation commissions and the lessees themselves to identify the controlling parties.

OTA determined the section 3 production deadlines for all pre-FCLAA coal leases using information on coal lease assignments and corporate ownership from OTA's coal lease data base and the coal lease ownership data base maintained by Western Network in Santa Fe, New Mexico. Information on lease assignments and ownership was gathered from Bureau of Land Management's coal lease records and corporate qualifications files and from State corporation commissioners and various business publications. In determining the production status of the pre-FCLAA leases, OTA relied on production and royalty information reports filed with the Interior Department and States and information from lessees.

FEDERAL COAL LEASE OWNERSHIP 1985 BY INDUSTRY

OTA's industry categories were originally defined in 1980. Coal lessees are grouped into categories according to the principal business activity of the lessee's parent company. Each major industry category controlled a total of five percent or more of the land under lease at any time between 1950-80. This appendix provides an update of changes in leaseholdings by industry categories since publication of our 1981 report. These findings are summarized in Chapter 3.

Utilities. Electric utility companies continue to be the largest leaseholding category as they were in 1975. There has been little assignment activity and no corporate acquisitions involving utilities since passage of FCLAA. However, several utilities have transferred leases among subsidiaries or reorganized joint venture relationships.

In the mid-1970's nearly half of all coal mined from Federal lease tracts was produced by electric utilities even though they controlled only about one-fifth of all acreage under lease. Although utility coal production has jumped five fold in the past decade, in 1983, utility coal output accounted for just 20 percent of all Federal coal production.

"Other" Companies. Marking a longstanding trend toward the entry of more widely diversified companies into the western coal industry, companies classified in the "other" category now form the second largest lease holding business category. These companies represent a wide-ranging assortment of businesses such as: construction companies, railroads, as well as banks and a property management corporation owned by The Church of Jesus Christ of the Latter Day Saints.

Most of the leases in this category acquired during the last decade were obtained by their current owners through lease assignments. The largest assignment involved the transfer of 16 Utah leases from El Paso Natural Gas Company to Swanton Energy Resources Co., a subsidiary of a New York company, Swanton Corporation.

Companies in the "other" category produced only 10 percent of the coal mined from Federal lands in 1983, although they controlled about 20 percent of the acreage under lease. (See Tables 18 to 21 in Chapter 3.)

Major Oil Companies. Oil majors are now the third largest business largest category of Federal coal lessees; they were the second largest category in 1975. The drop in rank occurred despite the fact that total oil major lease holdings increased from 138,409 acres to 141,157 acres during the decade. If the holdings of another oil major CONOCO, now a subsidiary of DuPont, were included in this category rather than under non-resource related diversified companies, the oil majors would still be the second largest lease holding category in 1985.

Oil majors have been involved in 7 of the 16 corporate acquisitions completed since FCLAA. (See Table 17.) Four of these acquisitions increased the holdings of oil majors, one resulted in a decrease, and two entailed no change.

Federal coal production by major oil companies has risen from 500,000 tons in 1972 to 45.1 million tons in 1983. Major oil companies produced over 40 percent of all Federal coal produced in 1983, more than twice as much Federal coal as any other industry group.

Nonresource-Related Diversified Companies Since 1975 nonresource-related diversified companies have more than quintupled their leaseholdings. This category consists mainly of large chemical and electrical equipment companies. Most of the increase in lease acreage resulted from the acquisition of Conoco, Inc. (with its subsidiary Consolidation Coal Co.) by DuPont. That acquisition more than offset the loss of leases from this industry category from the acquisition of Utah International, Inc. and most of its Federal coal lease holdings from General Electric Co. by Broken Hill Proprietary, Ltd., an Australian mining company. About 9 percent of all leased acreage is controlled by nonresource-related diversified companies.

Despite the major increase in lease acreage held by nonresource-related diversified companies during the last decade, these companies mined about 2 percent of the coal extracted from Federal land in 1983.

Oil and Gas Companies. Oil and gas companies held 70,365 acres of Federal land in 1984 compared to 42,193 acres in 1975. Its rank jumped from the ninth to the fifth largest lease holding business category. Coal production by oil and gas companies has increased from 200,000 tons in 1972 to 12.2 million tons in 1983, or about 11 percent of all the coal mined from leased lands.

Steel Companies. Steel companies holdings have increased their coal lease holdings only modestly since 1975. Two pending acquisitions, however, would greatly reduce steel company holdings if they are completed. Perma Resources Corp. is currently in the process of acquiring Kaiser Steel Corp's western coal operations and Armco Steel Corp. has reportedly found a buyer for its subsidiary, Evans Coal Co.

Federal coal production by steel companies has been about 1.0 million tons per year during the past decade, but their share of total production has dropped from 7 percent in 1972 to 1 percent in 1983.

Independent Coal Companies. The amount of Federal leased acreage held by independent coal companies fell by 40 percent between 1975 and 1984. Coal companies have fallen in rank from the third to the seventh largest lease holding group. During the past decade, Energy Fuels, Swisher Coal, and Cambridge Mining have been acquired and many other independents have assigned their leases, thereby contributing to the decline of independent coal companies in the Federal coal leasing program.

Although production by independent coal companies has increased from 2.0 million tons in 1972 to 3.6 million tons in 1983, the percentage of total Federal coal production from independent coal operators fell from 20 percent to 3 percent. This pattern, too, is part of a long-term trend toward domination of the western coal industry by companies that are not primarily engaged in mining coal.

Metals and Mining Companies. The leased acreage held by metals and mining companies fell dramatically between 1975 and 1980 and then increased between 1980 and 1984. Both of these changes were largely the result of acquisitions involving Utah International, Inc. The first was Utah International's acquisition by General Electric Co. in 1976 and the second was the 1984 purchase of Utah International by Broken Hill Proprietary, Ltd., an Australian based mining company. Another addition came as a result of the acquisition of Midcontinent Limestone Co. by Pitkin Iron Corp.

Metals and mining companies have consistently produced more Federal coal than predicted by the size of their holdings. In 1983, they contributed 11 percent of the total Federal coal production, although they held only 4 percent of the acreage under lease.

Natural Gas Companies. Among the major changes in this category during the past decade were Internorth Corp.'s acquisition of Belco Petroleum Corp. Lease assignments more than offset the marked decrease that resulted from the transfer of 16 Utah leases from El Paso Natural Gas Co. to Swanton Energy Resources Corp. following El Paso's acquisition by Burlington Northern, a railroad company prohibited from holding Federal coal leases by section 2(c) of the MLA.

Natural gas companies lessees began producing coal in the late 1970's. In 1983, natural gas company mines contributed about 2 percent of the total Federal coal production.

Peabody Coal Company. Peabody Coal Company was acquired in July 1977 by the Peabody Holding Company from Kennecott Corp. Peabody Holding Company is currently owned by five companies. The companies and their ownership percent are:

Newmont Mining Corp.	32.5 percent
The Williams Companies	32.5 percent
Bechtel Corp.	15.0 percent
The Boeing Company	15.0 percent
Equitable Life Assurance	5.0 percent

In 1984, Fluor Corp. one of the six original participants in the Holding Company sold its 10 percent share to the others and dropped out of the venture.

In 1975 Peabody controlled 68,923 acres of Federal coal land, about 9 percent of all acreage under lease. Peabody has been actively selling off Federal coal leases for the past decade. In addition, the company has relinquished four pre-FCLAA leases and has applied to relinquish about one dozen more. As a result of these transactions Peabody now holds 20,382 acres or 2 percent of all Federal land under lease. In 1983, Peabody produced 1 percent of the coal mined on Federal land.

Individuals. Another longstanding trend that has continued during the past decade has been the decline in leaseholdings by unincorporated individuals. The leaseholdings have declined 70 percent since 1975. About 2 percent of Federal acreage under lease is now controlled by individuals. Individuals fell from the sixth to the eleventh largest lease holding group during the past decade.

Historically individuals were active in coal leasing in two ways. Some individuals acquired lands for small mining operations (many of the leases now held by individuals were mined in the past either by the lessee or a member of his/her family.) Other individuals acted as land agents, brokers, or speculators and acquired Federal leases for resale to others, often retaining an overriding royalty interest in the Federal coal lease. Many of the leases acquired by this latter group of individuals have been assigned to coal producing companies since 1975.

Coal production from Federal lease tracts held by individuals in 1983 was less than 100,000 tons, a negligible amount; in 1972, these leases contributed 3 percent of total Federal coal output.

APPENDIX B

THE TOP 20 FEDERAL COAL RESERVES HOLDERS AND AND THEIR SECTION 3 COMPLIANCE STATUS

OTA used the recoverable reserves holdings of Federal lessees to identify the 20 major coal lessees. For purposes of this ranking OTA attributed the full acreage and reserves in which a lessee has an interest (which may be ownership of 100 percent or less of the lease or participation in a joint venture which owns a lease) to the lessee's parent corporation. Because the number of leases, acreage and reserves are not prorated, the totals can not be used to calculate the total number of leases, acres and reserves involved. OTA's rankings differ from those used by others, most notably the rankings published by the Department of the Interior, because we use reserves and do not prorate interests. OTA believes that prorating tends to obscure the extent of "control" or involvement of companies in the leasing program and what is at stake for them in any changes to the laws regarding coal leasing.

This section assesses the susceptibility of the individual parent companies to section 3 sanctions from nonproducing leases under their control. OTA assumes that "control" exists when a company is owned in whole, or in part as a result of participation in a joint venture, by another company. OTA has not attributed control through investments in stock of publicly traded companies or in holding companies. We note that for some purposes ownership of 10 percent or less of a corporation's stock is sufficient to be considered a "controlling" interest. There is some participation in the corporate affairs of some coal lessees through stock ownership by other coal lessees. For example, Chevron, which now owns Gulf, holds over 20 percent of the stock in Amax, another major Federal coal producer. Peabody Coal Company is owned by the Peabody Holding Company, which is in turn owned by five companies, including The Williams Companies which also owns Western Slope Carbon, a Federal coal lessee. OTA has not in this report attributed section 3 compliance status to the stockholding companies in these cases. However, the Department of the Interior might elect to do so in enforcing section 3. OTA's definition and conclusions may not coincide with the Department's eventual position on this matter.

Table A-1 lists the top 20 Federal Reserve Holders, the number of Federal leases in which they have an interest, the total recoverable reserves in those leases, the percentage of recoverable reserves in leases that are not likely to meet section 3 production deadlines. Together these lessees control approximately 65 percent of all Federal coal reserves under lease, or about 12.6 billion tons of coal. Approximately 47 percent of the reserves held by the top 20 leaseholders are not likely to be in production by the section 3 deadlines applicable to them. About 53 percent of the reserves held by the top 20 leaseholders are in lease tracts likely to meet section 3 production deadlines. The remainder of this report discusses briefly the holdings of each of the top 20 lessees and their section 3 status.

EXXON CORP.

Exxon Corp. controls 1.6 billion tons of Federal coal in 5 leases in the Powder River basin of Wyoming through its subsidiary Exxon Coal Resources, USA Inc. The lease tracts are part of the Caballo and Rawhide mines operated by another subsidiary, Carter Mining Co.

Despite its position as the largest Federal reserves holder, Exxon is one of only four companies among the top 20 lessees that are not endangered by section 3 sanctions. Both of its mines have approved mine permits and are in production. Logical mining unit applications are pending for the mines that would combine Federal coal leases and non-Federal reserves to comply with section 3 and diligence requirements.

Exxon Corp. is extensively involved in oil and gas exploration and production worldwide. It is also involved in minerals and chemical production. Its principal subsidiaries in these fields in the United States include Exxon Company, U.S.A, Exxon Minerals Co., and Exxon Chemical Co.

PACIFIC CORP. (Pacific Power & Light Co.)

Pacific Corp. controls 31 leases including over 1.4 billion tons of recoverable coal. Some of the leases are held in the name of the holding company's principal subsidiary, Pacific Power & Light Co. Most leases, however, are held by various subsidiaries of Nerco, Inc., a coal and mineral development company owned by Pacific Corp. Nerco leaseholding subsidiaries include Resource Development Co., Eden Ridge Coal Co., Spring Creek Coal Co., and Antelope Coal Co. In addition, Nerco subsidiaries hold at least a 50 percent interest in Decker Coal Co., a joint venture with Peter Kiewit and Sons, Inc., and Bridger Coal Co., a joint venture with Idaho Power Co.

Pacific Corp.'s leases form 10 mine units - six in Wyoming, three in Montana, and one in Washington. Six of the mining units are likely to meet the section 3 deadlines. These include five active mines - Dave Johnston, Jim Bridger, East and West Decker, and Spring Creek. The undeveloped Phillips Creek tract is likely to meet section 3 deadlines because it is to be developed as part of the Dave Johnston mine. The Antelope, Cherokee, Phillips Creek #2, and Eden Ridge tracts are not likely to comply with their section 3 deadlines. Nerco has told OTA that it does not plan to relinquish or assign noncomplying leases because of section 3, as it has no immediate need for additional Federal coal reserves.

Several Pacific Corp. subsidiaries, such as Nerco Oil & Gas Inc. and Nerco Minerals Co., are involved in non-coal mineral development in the western United States. According to Nerco, they are not currently involved in Federal oil and gas leasing.

AMAX, INC.

The third largest Federal leaseholder is Amax, Inc. which holds 6 Wyoming leases covering over 1.2 billion tons of coal. The lease tracts are part of two producing mines, Eagle Butte and Belle Ayr mines.

Because Amax's lease tracts are in production, the company will not face section 3 sanctions against new lease acquisitions. Amax acquired over 400 million tons of in new coal lease reserves since 1981 through the 1982 Powder River lease sale and the Northern Cheyenne lease exchanges.

ATLANTIC RICHFIELD COMPANY

Atlantic Richfield Co. (ARCO) has 13 Federal coal leases in Colorado, Utah, and Wyoming. The leases, which cover 1.2 billion tons of coal reserves, are held in the name of the parent company or its subsidiaries: Beaver Creek Coal Co., Thunder Basin Coal Co., or West Elk Coal Co.

The 13 leases are part of eight mining units. Six of the eight, are likely to comply with section 3: the Black Thunder and Coal Creek mines in Wyoming; Gordon Creek #2, Huntington Canyon, and Pinnacle tracts in Utah; and the Mount Gunnison tract in Colorado. The two noncomplying tracts include three leases and cover 51 million tons of Utah coal reserves, only 4 percent of the company's holdings.

As a major oil company, Atlantic Richfield Co. is involved in oil and gas production worldwide. It also produces a variety of metals and minerals through its ownership of Anaconda Corp. Other subsidiaries potentially affected by Section 3 sanctions are Arco Chemical Co., Arco Oil & Gas Co., Arco Exploration Co., and Arco Metals Co. In 1985 ARCO announced its intention to divest its Anaconda Minerals copper and molybdenum operations.

E.I. DUPONT DE NEMOURS & CO. (Consolidation Coal Company)

Dupont obtained the ultimate control of more than 30 Federal coal leases when it acquired Conoco, Inc. and its subsidiary Consolidation Coal Co. It currently holds 35 leases through Consolidation Coal Co. and Consol Land Development Co. These include 14 leases jointly held with subsidiaries of Chevron Corp. Consolidation's lease holdings cover 1.1 billion tons of Federal coal reserves.

Consolidation's lease holdings are part of 8 mining units in Utah, Colorado, North Dakota, and Montana. Only the Velva tract in North Dakota is part of a recently active mining project. The single 40 acre tract was mined out before passage of FCLAA (or SMCRA) and, according to OTA's 1981 North Dakota Report, has not yet been reclaimed and thus can not yet be relinquished. Nonproducing Consolidation tracts include leases in the Danforth Hills and North Park fields of Colorado, the CX Ranch tract in Montana, and the Emery, Kingston, and Kaiparowits tracts in Utah. With the possible exception of part of the Emery tract in Utah, these leases will not be producing by Consol's August 4, 1986, section 3 production deadline. Consol has been producing coal from non-Federal reserves in its Emery mine and could through LMU formation protect some of its nearby Federal leases.

In addition to its Federal leases, Consol operates mines on private and Indian lands in the West and is a contract mine operator for another mine in North Dakota.

Dupont is involved in the production of oil, gas, and a variety of minerals as part of its global chemical operations and, due to its ownership of Conoco, Inc., is itself a major oil company.

PEABODY HOLDING CO.

Peabody Holding Co. has 11 Federal coal leases in Colorado, Montana, New Mexico, and Wyoming. The lease tracts cover about 1.0 billion tons of Federal coal reserves in six distinct mining units. Most of the leases are held in the name of the Holding Company's subsidiary, Peabody Coal Co. In addition, Peabody Coal Co. is a member of the North Antelope Coal Co., a joint venture with Panhandle Eastern Pipeline Corporation, that company holds a Wyoming lease.

About 21 percent of Peabody leases are part of four mines that are likely to be producing in compliance with section 3: the Rawhide and North Antelope mines in Wyoming, the Big Sky mine in Montana, and the Seneca operation in Colorado. Peabody may have compliance difficulties with one of the leases in the Seneca 2W operation because the lease cannot be made a part of an approved LMU because it is not contiguous. The company holds properties, one each in New Mexico and Wyoming, that are not likely to achieve commercial production by their section 3 deadline. The non-producing properties include only three leases, but these leases contain 79 percent of the leased reserves the company now controls. Peabody Coal Co. has relinquished four leases in the Denver basin in recent years and has applied to relinquish or assign a number of other non-producing leases, including its leases on the Kaiparowits Plateau. Peabody's half interest in the Star Lake, New Mexico lease has been assigned to Texas Utilities, however, final approval of that assignment has been held up because of litigation involving the property. Upon approval of its pending relinquishments and assignments, Peabody will have significantly reduced its number of non-producing leases that could create a section 3 disqualification.

Although Peabody Coal Co. itself is not involved in the leasing of other minerals, several of the Holding Company's members are extensively involved in coal and non-coal mineral development. Newmont Mining Co. develops a number of minerals and its subsidiary, Newmont Oil Co., is involved in oil and gas production. Also, the Williams Company has a number of subsidiaries involved in mineral and oil and gas development, including Northwest Energy Corp. (which holds several Federal coal leases), Williams Natural Gas Co., Williams Exploration Co., and Agrico Chemical Co.

BROKEN HILL PROPRIETARY, LTD.

The Australian company, Broken Hill Proprietary, Ltd., (BHP) purchased Utah International, Inc. from General Electric Corp in 1984. Utah International currently holds 30 leases covering 930 million tons of coal in the name of Utah International or Utah's International's subsidiary, the San Juan Coal Co. BHP also acquired Energy Reserves Group which holds four Federal coal bases in Utah.

Utah International holds leases in seven mining units in New Mexico, Colorado, and Utah. Only two, the recently acquired La Plata property in New Mexico and one lease that is part of the Trapper mining operation in Colorado, are likely to comply with section 3. Several mining tracts within the Danforth Hills property in Colorado and the large 20-lease East Alton tract in Utah are not likely to meet the section 3 production deadlines. These properties contain about 86 percent of the company's leased Federal reserves. Both the Danforth Hills and Alton tracts are very attractive mining properties should market conditions improve. Utah International has added to its Danforth Hills reserves through the acquisition of several new leases in the area since 1981. Energy Reserve Group's two Utah mining properties, Skumpah Canyon and Rock Canyon, are currently nonproducing and are also unlikely to comply with section 3.

Utah International is also the contract operator for the Trapper Mine in Utah and the San Juan Mine in New Mexico, but the Federal leases in these mines are owned by others.

The 1983 and 1984 Moody's Industrial Manuals listed no oil or natural gas exploration or production activities on the part of Utah International or its subsidiaries. The company, however, is involved in a range of non-energy mineral production projects. Energy Reserve Group, however, is actively involved in onshore oil and gas exploration and development in the western United States.

TEXACO, INC.

Texaco, Inc. holds five Wyoming Federal coal leases that it originally acquired in its own name. It also controls 12 leases as a result of its acquisition of Getty Oil Corp. Getty originally acquired most of its leases through its acquisition of Energy Fuels Corp. of Colorado (now Colorado-Yampa Coal Co.) and Plateau Mining Co. of Utah. Texaco's leaseholding total about 927 million tons of coal.

The Lake DeSmet tract was reserved for possible exchange under provisions of the 1978 Federal Coal Leasing amendments. The exchange proposal was rejected as not in the public interest and the tract remains undeveloped.

Over 85 percent of Texaco's leased coal is located in the Lake DeSmet tract in Wyoming and will not be producing on August 4, 1986. Two other tracts containing 11 leases -- the Colorado-Yampa Energy Fuels mine in northwest Colorado and the Star Point mine in Utah -- are currently in production. Getty also owns a share of the Skyline mine operated by Coastal States Energy Co. In 1985, Texaco sold most of Getty's coal operations, including the Federal leases, to Cyprus Mining. As far as OTA can determine, Texaco still retains the Lake DeSmett leases.

CHEVRON CORP.

Until 1984, Chevron Corp.'s only Federal coal lease was an interest the undeveloped CX Ranch lease in Montana. But in 1984 it acquired Gulf Oil Corp. and Gulf's subsidiary, Pittsburgh & Midway Coal Co. Chevron currently holds or controls part or all of 38 coal leases, more than any other company, in the names of Gulf Oil Corp. and Pittsburgh & Midway. Ownership of 14 leases in Colorado and Utah acquired by Gulf when it absorbed the Kemmerer Coal Company leases is shared with DuPont's subsidiary, Consolidation Coal Co. Chevron's holdings include 803 million tons of coal reserves.

Chevron controls leases in Colorado, New Mexico, and Wyoming. Of the 12 mining units into which its 38 leases fall, only four are likely to be producing by August 4, 1986, Chevron's anticipated section 3 compliance date. These 3 mines are: the Edna Mine in Northwest Colorado, the McKinley mine in New Mexico, and the Elkol-Sorenson mine in Wyoming which includes the North Block as well as the Elkol-Sorenson mining units. Seven tracts in Wyoming, Utah, and Colorado, totalling 90 percent of the company's leased Federal reserves, are not likely to be in production soon. They are the North Park, Tongue Mesa, Gulf #3, Wildcat, North North Block, Danforth Hills #12, and Emery Field tracts. According to Gulf, one of these, the North North block, might be combined into an LMU with the Elkol-Sorenson operation as part of the Kemmerer Mine. Two other Wyoming tracts in the Powder River basin are under consideration for coal lease exchanges under the I-90 provisions of the 1978 Amendments.

Both Chevron and Gulf Oil are extensively involved in oil and natural gas production. Other subsidiaries, such as Chevron Resources Co., are involved in the production of non-coal minerals.

KERR MCGEE CORP.

The Kerr McGee Corp. controls only five leases, but the lease tracts involved cover 736 million tons of coal reserves. Two of the leases are in the producing Jacob's Ranch mine in Wyoming. The other three leases are also in Wyoming and are part of the East Gillette tract. About half of the company's leased reserves are part of the East Gillette property; it is unlikely that this tract will achieve commercial production by the anticipated section 3 deadline because of market conditions. The tract is, however, near other Kerr McGee operations and part of it will be exchanged for unleased Federal coal, under the I-90 lease exchange.

Kerr McGee Corp. is involved in oil and gas exploration and production through its subsidiaries Kerr McGee Refining Corp. and Kerr McGee Chemical Corp.

THE SUN COMPANY, INC.

The Sun Company controls six Utah leases, one lease in Wyoming, and one in Kentucky, with a total of 643 million tons of coal. The western leases are held by Sun's subsidiary Sunoco

Energy Development Co. (SUNEDCO) and the eastern lease is owned by Greenwood Land & Mining Co.

Only one pre-FCLAA lease tract controlled by Sun Company is in a producing mine, but this lease, part of the Cordero Mine in Wyoming, includes 85 percent of the company's leased reserves. Six Utah leases are part of the Sage Point-Dugout Canyon mine which was recently permitted. However, because of market conditions, it is uncertain whether the mine will open in time to keep its permit or to produce in commercial quantities for section 3. Recently, Sun announced the purchase of the producing Soldier Canyon mine nearby. It may be possible in the future to form an LMU with the Sage Point property and obtain credit for Soldier Canyon production. The Sage Point lands are also part of the lands selected by the State of Utah and could be transferred to State ownership. The Kentucky lease was issued after passage of FCLAA and therefore has a 10-year section 7 diligence deadline.

The Sun Company, Inc. is extensively involved in exploration and production of oil and natural gas. Many divisions and subsidiaries, including Sun Exploration & Production Co., engage in oil and gas related business activities.

SHELL OIL COMPANY

Shell Oil Company controls three leases in Wyoming and one in Montana, with a total of 641 million tons of reserves. All are held in the name of the parent company, Shell Oil Corp.

The lease tracts form three mining units, one of which - the Buckskin tract, is likely to comply with the section 3. The North Rochelle tract in Wyoming and the Pearl tract in Montana are not likely to produce. Shell withdrew its permit application for the Pearl mine in 1980 and focused its efforts on the better quality Wyoming properties. Shell was able to acquire additional new lease reserves for the Buckskin mine in the 1982 Powder River lease sale.

Shell Oil Company is extensively active in oil and natural gas exploration and production. Subsidiaries including Shell Mining Co. and Shell Energy Resources, Inc. are also involved in other mineral production activities.

PETER KIEWIT SONS, INC.

Peter Kiewit Sons, Inc. (PKS), a Nebraska based mining and construction company controls 13 Federal coal leases, including its holdings as part of joint ventures. The leases are located in Wyoming and Montana and contain about 582 million tons of reserves.

PKS holds one lease, the Wolf Mountain property in Montana, in the name of the parent company. Its three wholly owned subsidaries, Montana Royalty Co., Rosebud Coal Sales and Big Horn Coal Co. hold a total of six leases. PKS is also involved in several joint ventures: Decker Coal Company with Pacific Power & Light Co.; Cumberland Coal Co. and Black Butte Coal Co. with Rocky Mountain Energy Co., a subsidiary of the Union Pacific Corp. Three PKS leases have section 3 compliance problems; two tracts, the South Haystack Mine and the Wolf Mountain Property have no contracts for planned production. One 80 acre lease, in Wyoming is unlikely to comply with section 3 because it has unfavorable development potential.

KANEB SERVICES, INC.
NORTHWEST MUTUAL LIFE INSURANCE CO.

Texas Energy Services, Inc., a subsidiary of Kaneb Services, Inc. and Northwest Mutual Life Insurance Company jointly obtained a single Wyoming coal lease in 1983 that was big enough to place these companies the 14th largest Federal leaseholder. The Rocky Butte lease covers 4,856 acres and 445 million tons of coal. Because the lease was issued after passage of FCLAA, Kaneb and Northwest Mutual face a section 7 diligence deadline in 1993 rather than a section 3 development timetable. Development of the lease is uncertain as it was reportedly acquired to supply the planned Hampshire Synfuels plant which has now been abandoned. Kaneb also controls a single Alabama lease through a subsidiary, Leeco, Inc.

U.S. STEEL CORP.

U.S. Steel Corp. owns 19 Federal western leases. The leases are located in Utah, Colorado, and Montana and they cover 438 million tons of reserves. Only one mine, the Somerset Mine in Colorado, is currently in production. U.S. Steel's Geneva Mine in Utah which supplied coal to its steelmaking operations there was recently shut down. The undeveloped reserves include two leases south of Paonia Colorado, eight leases in the Coal Basin field of Colorado, and two leases in the Fort Union Region of Montana. U.S. Steel has no current plans for mining these leases.

The Resource Development Division within U.S Steel is involved in a variety of non-energy mineral production projects. In addition, the company owns Marathon Oil Co. which has extensive oil and natural gas operations and be actively involved in Federal oil and gas leasing.

MOBIL CORP.

Mobil Corp. controls one Wyoming lease in the name of its principal subsidiary, Mobil Oil Corp. The lease covers 3,959 acres and 424 million tons of coal reserves. The lease was previously divided into two leases but was recently reconsolidated into a single lease. The lease is part of the Rojo Caballo mine that is currently in production. Based on its production status, Mobil will not face section 3 sanctions. However, Mobil has expressed concern that it would not have enough production on its newly opened mine to satisfy the producing in commercial quantities test. At its current production rate, it should be able to comply. Mobil currently has the earliest diligent production deadline of any major coal lessee as a result of the settlement of a lawsuit over the 1976 diligence regulations. Mobil must produce 2.5 percent of its lease reserves by 1987.

SWANTON CORP.

Swanton Corp. obtained 16 Utah coal leases in 1984 in the name of its subsidiary, Swanton Energy Resources Co. The leases cover 361 million tons of coal. The lease tracts are all part of the proposed Red & Blue and El Paso mining units on the Kaiparowits Plateau in southern Utah. The leases were acquired from El Paso Energy Company after that Corporation was taken over by the Burlington Northern Railroad, which cannot own Federal coal leases. Mining on this block is unlikely to be achieved before the leases' section 3 deadlines in 1994.

With the exception of coal, Swanton Corp. is not involved in the leasing of minerals, including oil and natural gas, in the western United States. It major lines of business activity include financial and investment services and retail appliance stores in the New York City area.

ARIZONA PUBLIC SERVICE CO.
SAN DIEGO GAS & ELECTRIC CO.
SOUTHERN CALIFORNIA EDISON CO.

These three southwestern utility companies each own one third of 21 Utah leases covering 40,276 acres and 345 million tons of coal. Title to the leases is held in the names of

Malapai Resources, New Albion Resources Co., and Mono Power Co., respectively. The lease tracts are all part of the proposed Kaiparowits Nos. 1-5 mines. The leases will not be producing by August 4, 1986, if ever. The leases were acquired in the 1960's to assure an independent coal supply for these utilities for proposed powerplants in the Southwest.

All three utilities are involved in the development of a variety of energy resources, but, with the exception of Mono Power Company's oil exploration activities, the Moody's Industrial Manual does not indicate any involvement in noncoal mineral leasing.

IDAHO POWER CO.

Idaho Power Co. has an interest in three Wyoming leases through its one third interest in the Bridger Coal Co., a joint venture with Pacific Power & Light Co. that operates the Jim Bridger Mine. The mine is currently producing well in excess of the amounts required for commercial quantities and all leases are expected to be in compliance with section 3. Idaho Power Co. holds no other Federal coal leases.

MONTANA POWER CO.

Montana Power Co. holds nine Federal coal leases with over 287 million tons of reserves. It's wholly owned subsidiary Western Energy Co. holds eight leases that are part of or associated with its Colstrip Mine. It is expected that all the Montana leases will be able to comply with the section 3 requirements through LMU formation, although according to the company, one of its leases has already been mined out and is under reclamation.

Another Montana Power Co. subsidiary, Northwestern Resources Co., owns a lease in Wyoming that has abandoned mine workings left by previous owners. An application has been filed for relinquishment of this single nonproducing lease, but final approval has been delayed pending a determination that all required surface restoration work has been successfully completed. The Wyoming lease is the company's only lease with section 3 compliance problems.

Table A-1

The Top 20 Federal Reserve Holders
Section 3 Compliance Status

	PARENT COMPANY OF LESSEES	TOTAL NUMBER OF LEASES	RECOVERABLE RESERVES UNDER LEASE (m.t.)	POTENTIALLY NONCOMPLYING		
				LEASES	RESERVES*	
1	Exxon Corp.	5	1,490	0	0	0%
2	Pacific Power & Light Co. [a]	31	1,453	10	427	27%
3.	Amax, Inc.	6	1,261	0	0	0%
4.	Atlantic Richfield Co.	13	1,242	3	51	4%
5.	DuPont[1]b	35	1,135	31	1,049	93%
6.	Peabody Holding Co. [c]	11	1,019	4	800	79%
7.	Broken Hill Prop. Ltd. [d]	30	930	25	624	67%
8.	Texaco, Inc. [e]	17	927	5	800	86%
9.	Chevron Corp. [f]	38	803	24	725	90%
10.	Kerr-McGee Corp. [g]	5	736	3	398	54%
11.	The Sun Co. [h]	8	643	6	97	15%
12.	Shell Oil Corp.	4	641	2	240	37%
13.	Peter Kiewit Sons, Inc. [i]	13	582	3	70	12%
14.	Kaneb Services, Inc. & Northwest Life Insurance	2	445	0	0	0%
15.	United States Steel Corp.	19	438	12	339	83%
16.	Mobil Corp. [j]	1	424	0	0	0%
17.	Swanton Corp.	16	361	16	361	100%
18.	Arizona Public Service San Diego Gas & Electric Southern Ca. Edison	21	345	21	345	100%
19.	Idaho Power Co. [k]	3	329	0	0	0%
20.	Montana Power Co.	9	287	1	0	0%
	TOTAL**	264	12,593	150	5,976	47%

NOTES

* All reserves in millions of tons.

** Totals have been adjusted to avoid double counting of jointly held reserves.

a. Includes joint ventures.

b. Includes 14 leases in which CONOCO, subsidiary Consolidation Coal Co., and Chevron's Gulf Oil subsidiary each own 50%. The leases total 23,890 acres with 241 million tons of reserves.

c. Totals exclude leases and reserves on which relinquishments and assignments have been approved or are currently pending.

d. Includes subsidiaries Utah International, Inc. and Energy Reserves Group, Inc.

e. Includes Texaco's Lake DeSmet holdings and leases held by Getty Minerals, but does not reflect recently announced sale of Getty's coal operations to Cyprus Mining or sale of Getty's 50% share of the Skyline Mine in Utah to Coastal States Energy Co.

f. Includes 14 leases in which Chevron's Gulf Oil subsidiary and Dupont's Consolidation Coal Company subsidiary each own 50%. The leases total 23,890 acres with 241 million tons of reserves.

g. Does not include adjustments for pending I-90 lease exchange of part of the East Gillette tract in Wyoming.

h. Does not include Sun's recently announced purchase of Soldier Canyon mine in Utah from California Portland Cement.

i. Includes joint ventures.

j. Total leases reflect two Mobil leases in the Rojo Caballo Mine now reconsolidated into a single lease.

k. Includes joint venture Bridger Coal Co. with Pacific Power & Light Co.

SOURCE: Office of Technology Assessment

APPENDIX C

Assessment of Coal Lease Payment Options

OTA examined a range of options that require payments as a precondition for lifting the section 3 disqualification from a noncomplying leaseholder. OTA used a standard engineering-accounting method to calculate the after tax net present cost of each option for two model lease tracts, an underground mine in Utah and a surface mine in the Powder River Basin of Wyoming. The tract characteristics were chosen to be representative of a lease tracts that could be used to sustain new mining operations in these regions. The trait characteristics are summarized below. The options were originally selected in May 1985, based upon various proposals that were then circulating: additional holding fees were analyzed in Fall 1985 to include the more significant payment requirements of later proposals. The revised analysis is included in Chapter 4.

The payment options are summarized below.

Delay Rental: A non-recoupable annual payment for the privilege of deferring development of the property which could be avoided by relinquishing the lease or beginning production. This payment would begin immediately and stop upon production. (These payments can be expensed or capitalized at the payor's option for tax purposes.)
Several variations of delay rental payments were costed out:

Option 1: Acreage-based delay rental
- (a) $1 per acre
- (b) $5 per acre

Option 2: Reserves-based delay rental, fixed rate
- (a) $0.0001 per ton on 1% of reserves
- (b) $0.001 per ton on 1% of reserves
- (c) $0.0001 per ton increasing annually by $0.0001 to a cap of $0.001

Option 3: Reserves-based delay rental, ad valorem rate
- (a) 0.5% of value on 1% of recoverable reserves, constant price
- (b) 0.5% of value on 1% of reserves with 4% annual price increase

Minimum Royalty: A substantially uniform annual payment in the absence of mineral production. The payment is imposed on readjustment which is assumed to occur in year 5. The payment is recoupable. For tax purposes it can be expensed in the year paid.

Option 4: Minimum Royalty, Reserves-based, Fixed rate
- (a) $.0.0001 per ton on 1% of recoverable reserves
- (b) $0.001 per ton on 1% of recoverable reserves

Option 5: Minimum royalty, Reserves-based, ad valorem rate
- (a) 0.5% of value, 1% reserves, constant price
- (b) 0.5% of value, 1% reserves, 4% annual price increase

Advance Royalty: Payment begins immediately and ends on production. The payment is nonrecoupable. For tax purposes, we assume it is capitalized and that cost depletion is used. (We note that it is more likely that percentage depletion might be used, it is not used here as it would not directly reflect the impact of the holding fee.)

Option 6: Advance Royalty- Reserves based - fixed rate
- (a) $0.0001 per ton on 1% of reserves
- (b) $0.001 per ton on 1% of reserves
- (c) $0.0001 escalating annually by $0.0001 to a cap of $0.001

Option 7: Advance Royalty - Reserves based - ad valorem rate
- (a) $0.5% of value on 1% of reserves, constant price
- (b) $0.5% of value on 1% of reserves, 4% annual price increase

Several additional options have since been analyzed using the programs developed for this study.

Characteristics of Tracts Used in OTA Analysis of Holding Fees

Wyoming Lease:
- Powder River Basin
- Surface mine
- 2000 acres
- 200 million tons of reserves
- 60 foot seam
- 8500 BTU/lb., 0.58% sulfur, 6% ash
- 5 million tons per year
- Recovery rate 90%
- Mine life 40 years
- F.O.B. mine price $7.60 (contract)
- Readjustment in year 5
- Federal royalty 12.5%
- Production begins in year 10

Utah Lease
- Uinta Region
- Underground Mine
- 2000 acres
- 21.6 million tons of reserves
- 12 foot seam
- 11,500 BTU/lb., 0.5% sulfur, 9% ash
- 500,000 tons per year
- Recovery rate 50%
- Mine life 40 years
- F.O.B. mine price $26.00 (contract)
- Readjustment in year 5
- Federal royalty 8%
- Production begins in year 10

TABLE A-2

ANALYSIS OF HOLDING FEE OPTIONS
After Tax Net Present Cost to Lessee

	WYOMING	UTAH
Delay Rental		
1(a) $1/ac	$7,030	$7,030
1(b) $5/ac	$35,100	$35,100
2(a) $0.0001/ton on 1% reserves	$632	$76
2(b) $0.001/ton on 1% reserves	$6,320	$760
2(c) escalating $0.0001-0.001 on 1% reserves	$2,140	$255
3(a) 0.5% value on 1% reserves constant price	$240,000	$98,700
3(b) 0.5% value on 1% reserves 4% Annual increase	$276,000	$113,000
Minimum Royalty		
4(a) $0.0001/ton on 1% reserves	$54	$6
4(b) $0.001/ton on 1% reserves	$540	$60
5(a) 0.5% value on 1% reserves constant price	$20,700	$8,480
5(b) 0.5% value on 1% reserves 4% Annual increase	$27,100	$11,100
Advance Royalty		
6(a) $0.0001/ton on 1% reserves	$839	$104
6(b) $0.001/ton on 1% reserves	$8,390	$1,040
6(c) escalating $0.0001-0.001 on 1% reserves	$2,704	$342
7(a) 0.5% value on 1% reserves constant price	$319,000	$135,000
7(b) 0.5% value on 1% reserves 4% Annual increase	$381,000	$137,000
Mining SubComm Draft		
(a) $0.001/ton/yr	$632,365	$75,883
(b) $0.01/ton/yr	$6,323,654	$758,837

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FEDERAL COAL LESSEES AND THEIR PARENT COMPANIES

LESSEE	PARENT #1	BUS. CAT.	PARENT #2	BUS. CAT.	LEASES	ACRES	RECOV. RES.
AMCA Coal Leasing, Inc.	AMCA Resources	coal			6	2532	31.85
Abston Construction Co.	Abston Construction Co.	coal			1	638	1.17
Alabama Electric Coop.	Alabama Electric Coop.	utility			1	198	0.06
Alaska State Bank	Alaska State Bank	other			1	600	0.00
American Colloid Co.	American Colloid Co.	other			1	80	2.28
American Minority Mining	American Minority Mining	other			1	400	1.80
Ametex Corp.	Ametex Corp.	other			2	280	0.49
Anchor Coal Co.	Fluor Corp.	other			1	280	5.34
Antelope Coal Co.	Pacific Power & Light Co.	utility			2	4777	266.70
Apex Mining Company, Inc.	Apex Mining Company, Inc.	coal			2	240	0.52
Ark Land Co.	Ashland Oil Co.	o&g	Hunt Enterprises	o&g	14	16223	61.34
Atlantic Richfield Co.	Atlantic Richfield Co.	oil major			3	7419	196.43
Bank of America	BankAmerica Corp.	other			4	6872	135.59
Basin Cooperative Services	Basin Cooperative Services	utility			3	2425	28.10
Bass, R. & Bass Trusts	Bass, R. & Bass Trusts	other			1	20701	242.10
Baukol-Noonan, Inc.	Baukol-Noonan, Inc.	coal			1	2325	40.63
Beaver Creek Coal Co.	Atlantic Richfield Co.	oil major			7	5494	93.54
Belco Petroleum Corp.	Internorth Corp.	nat gas			1	4551	215.80
Bell, J.	Bell, J.	individ			1	80	0.05
Big Horn Coal Co.	Peter Kiewit Sons, Inc.	other			2	440	27.80
Bishopsgate Coal Corp.	Bishopsgate Coal Corp.	coal			1	161	0.84
Black Butte Coal Co.	Peter Kiewit Sons, Inc.	other	Union Pacific Corp.	other	1	14902	74.00
Blackhawk Coal Co.	American Electric Power Co.	utility			11	12698	250.00
Bokoshe Coal Company	K & R Coal Co.	coal			1	80	0.13
Bonsness, L.	Bonsness, L.	individ			1	80	0.16
Bridger Coal Co.	Pacific Power & Light Co.	utility	Idaho Power Co.	utility	3	8436	329.80
Brigham Young University	Brigham Young University	other			3	277	1.54
Bugni, A.	Bugni, A.	individ			1	80	0.00
Bugni, T. & R.	Bugni, A. & T.	individ			1	80	0.00
CF&I Steel Corp.	Crane Co.	other			1	3470	5.40
COP Coal Development Co.	COP Coal Development Co.	coal			2	1480	19.39
CPS Mining Co, Inc.	CPS Mining Co, Inc.	other			1	538	0.30
California Portland Cement Co.	California Portland Cement Co.	other			1	1548	21.36
Cameron Coal Co.	Cameron Coal Co.	coal			3	4464	14.83
Capital Development Co.	Capital Development Co.	other			1	1832	7.80
Carbon Coal	Hamilton Bros. Jt. Venture	o&g	Property Holding Co. of Albuqu	other	1	160	0.48
Cari International Mining Corp	Cari International Mining Corp	other			1	360	1.31
Carroll County Coal Co.	Carroll County Coal Co.	other			1	412	18.38
Chapman, R.	Chapman, R.	individ			1	1675	17.60
Chevron Coal Development Co.	Chevron Corp.	oil major			1	674	110.00
China Butte Coal Co.	China Butte Coal Co.	other			1	5974	62.73
Clinchfield Coal	Pittston Coal Co.	coal			1	251	0.30
Coastal States Energy Co.	The Coastal Corp.	nat gas			10	13299	78.30
Colorado Westmoreland, Inc.	Westmoreland Coal Co.	coal			4	6443	46.91
Colorado Yampa Coal Co.	Texaco, Inc.	oil major			1	274	0.73
Colowyo Coal Co.	W.R. Grace & Co.	nrrd	Hanna Mining Corp.	m&m	2	2590	146.70
Conotton Land Co.	Cravat Coal Co.	coal			2	400	1.50
Consol Land Development	DuPont	nrrd			1	1895	48.70
Consolidation Coal Co.	DuPont	nrrd			34	57531	1086.24
Corp. of the Presiding Bishop	Corp. of the Presiding Bishop	other			3	3045	0.00

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FEDERAL COAL LESSEES AND THEIR PARENT COMPANIES

LESSEE	PARENT #1	BUS. CAT.	PARENT #2	BUS. CAT.	LEASES	ACRES	RECOV. RES.
Coteau Properties, Inc.	North American Coal Corp.	coal			3	3198	60.20
Cumberland Coal Co.	Peter Kiewit Sons, Inc.	other	Union Pacific Corp.	other	1	1408	29.70
Davis, R.	Davis, R.	other			1	40	0.07
Decker Coal Co.	Pacific Power & Light Co.	utility	Peter Kiewit Sons, Inc.	other	5	14771	374.50
Denton, C.	Denton, C.	individ			1	80	0.30
Divide Coal Mining Co.	Divide Coal Mining Co.	coal			1	80	0.80
Dorchester Coal Co.	Damson Oil Corp.	o&g			3	14729	117.70
Eastern Coal Properties, Inc.	Eastern Gas & Fuel Associates	other			1	1910	33.62
Eden Ridge Coal Co.	Pacific Power & Light Co.	utility			2	4874	30.00
Edison Development Co.	Commonwealth Edison	utility			1	7066	103.00
Emery Energy, Inc.	Emery Energy, Inc.	coal			1	3795	20.30
Empire Energy Corp.	Standard Oil of Indiana. Co.	oil major			4	1133	29.40
Energy Development Co.	Iowa Public Service Co.	utility			1	8683	6.90
Energy Reserves Group, Inc.	Broken Hill Proprietary Ltd.	m&m			4	7849	51.70
Equipment Rental Service	Equipment Rental Service	other			1	480	0.00
Evans Coal Co.	Armco Steel Corp.	steel			11	17857	54.72
Exxon Coal Resources USA, Inc.	Exxon Corp.	oil major			2	2200	0.00
Exxon Coal USA	Exxon Corp.	oil major			3	11057	1489.80
FMC Corp.	FMC Corp.	nrrd			2	3201	11.50
Falkirk Mining Co.	North American Coal Corp.	coal			1	160	2.14
Fannin Square Corp.	Texas Eastern Transmission	nat gas			1	1910	33.62
Farrell Cooper Mining Co.	Farrell Cooper Mining Co.	coal			6	10246	34.08
Files, Jerry A.	Files, Jerry A.	individ			1	521	0.72
Fort Union Mine Partnership	Frontier Coal Co. USA	o&g			1	1913	115.00
Frandsen, G.	Frandsen G.	individ			1	40	0.42
Franklin Real Estate Co.	American Electric Power Co.	utility			1	634	3.35
Freeman-United Mining Co.	General Dynamics Corp.	nrrd			1	561	0.00
Fulton, C.	Fulton, C.	individ			1	80	0.30
Gaither, K.	Gaither, K.	individ			1	2557	6.48
Gaither, Kenneth R.	Gaither, Kenneth R.	individ			1	5707	12.60
Garland Coal & Mining Co.	Garland Coal & Mining Co.	coal			4	3084	8.60
General Electric Holdings, Inc	General Electric Corp.	nrrd			3	5290	0.00
Gent's Flying Enterprises	Gent's Flying Enterprises	other			2	160	1.75
Geo Resources Exploration, Inc	Geo Resources Exploration, Inc	other			1	320	0.69
Getty Minerals Marketing, Inc.	Texaco, Inc.	oil major			7	6710	75.00
Getty Mining Co.	Texaco, Inc.	oil major			4	3929	51.00
Grand Mesa Properties Co.	Eastern Gas & Fuel Associates	other	NICOR, Inc.	nat gas	2	1266	20.46
Granite Creek Coal & Uranium	Granite Creek Coal & Uranium	other			1	280	0.20
Great National Corp.	Great National Corp.	other			1	140	0.14
Greenwood Land Mining Co.	The Sun Co.	oil major			1	409	0.26
Gulf Oil Corp.	Chevron Corp.	oil major			40	58866	803.74
HFCO, Inc.	HFCO, Inc.	coal			1	98	0.09
Hall, H.	Hall, H.	individ			1	880	0.28
Hayden Gulch West Coal Co.	W.R. Grace & Co.	nrrd	Hanna Mining Corp.	m&m	1	5298	63.64
Helen Mining Co.	North American Coal Co.	coal			2	81	0.18
Hiko Bell Mining & Oil Co.	Hiko Bell Mining & Oil Co.	o&g			3	6400	42.76
Howe Coal Co.	Norm & Co.	other			6	12439	30.43
IBI Coal Co.	Ideal Basic Industries, Inc.	other			5	9306	55.88
Ingraham, F.	Ingraham, F.	individ			1	160	0.14
Intermountain Exloration Co.	Intermountain Exploration Co.	m&m			1	160	0.00

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FEDERAL COAL LESSEES AND THEIR PARENT COMPANIES

LESSEE	PARENT #1	BUS. CAT.	PARENT #2	BUS. CAT.	LEASES	ACRES	RECOV. RES.
Israel, J.J.	Israel, J.J.	individ			1	80	0.07
Jennings, James Sanders	Jennings, James Sanders	individ			1	40	0.39
Johnson, G. & A.	Johnson, G. & A.	individ			1	80	0.20
K&R Coal Co.	K&R Coal Co.	coal			1	1180	5.09
Kaiser Steel Corp.	Kaiser Steel Corp.	steel			10	15093	86.58
Kanawha Hocking Coal & Coke	Quaker State Oil Refining Co.	o&g			6	8767	347.22
Kerr Coal Co.	Centurion Trust	other			1	770	4.90
Kerr-McGee Coal Co.	Kerr-McGee Corp.	o&g			5	8695	735.70
King Cannel Coal Co.	King Cannel Coal Co.	other			1	240	1.18
Kingston, C. & J.	Kingston, C. & J.	individ			1	120	1.45
Knife River Coal Co.	Montana-Dakota Utilities	utility			6	9024	145.03
Kukuchka, C. & W.	Kukuchka, C. & W.	individ			1	40	0.00
LEECO	Kaneb Services	other			1	362	0.60
Lombardi, P.	Lombardi, P.	individ			1	80	0.08
Lone Star Steel Co.	Northwest Industries. Inc.	other			8	11090	17.84
Loveless, Robert M.	Loveless, Robert M.	individ			1	2560	0.00
Malapai Resources Co.	Arizona Public Service Co.	utility			21	40276	345.23
Martin, J., trustee	Martin, J., trustee	other			1	40	0.17
Martinez, A.	Martinez, A.	individ			1	40	0.14
Material Service Corp.	General Dynamics Corp.	nrrd			2	4842	18.30
McKinnon Trusts	McKinnon Marital & Resid. Tr.	other			5	8672	96.52
Meadowlark Farms, Inc.	Amax, Inc.	m&m			6	9038	1261.10
Medicine Bow Coal Co.	Ashland Oil Co.	o&g	Hunt Enterprises	o&g	3	7011	17.90
Mid-Continent Limestone Co.	Pitkin Iron Corp.	m&m			3	2020	14.54
Mid-Continent Resources Corp.	Mid-Continent Resources Corp.	coal			9	7479	62.50
Mining Systems Corp.	Standard Equipment, Inc.	other			1	680	0.32
Mobil Coal Resources Co.	Mobil Corp.	oil major			2	3959	424.50
Mono Power Co.	Sourthern California Edison	utility			21	40276	345.23
Monolith Portland Cement Co.	Monolith Portland Cement Co.	other			1	173	9.43
Montana Royalty Co.	Peter Kiewit Sons, Inc.	other			1	40	0.00
Mountain States Resource Corp.	Mountain States Resource Corp.	other			2	11387	103.37
National King Coal Co.	National King Coal	coal			1	160	2.44
National King Coal, Inc.	National King Coal	coal			1	180	0.00
Neil Butte Co.	Ranchers Energy Co.	other			1	3238	170.00
Nevada Electric Investment Co.	Nevada Power Co.	utility			8	10375	0.00
New Albion Resources Co.	San Diego Gas & Electric Co.	utility			21	40276	345.23
North American Coal Co.	North American Coal Corp.	coal			3	2178	3.53
North Antelope Coal Co.	Peabody Holding Co.	peabody	Panhandle Eastern Pipeline Co.	nat gas	2	1360	132.15
North Central Energy Co.	K-N Energy, Inc.	nat gas			1	962	17.05
Northern Minerals Co.	Internorth Corp.	nat gas			5	3262	48.32
Northwest Carbon Co.	Williams Companies	nat gas			1	400	14.25
Northwest Mutual Life Ins. Co.	Northwest Mutual Life Ins. Co.	other			1	4856	445.00
Northwestern Resources Co.	Montana Power Co.	utility			1	120	0.90
P.I.I. West Ltd.	Petroleum International, Inc.	o&g	Westhoff Brothers, Inc.	other	2	6182	12.11
Pacific Power & Light Co.	Pacific Power & Light Co.	utility			13	14262	78.65
Padilla, F.	Padilla, F.	individ			2	160	0.78
Paragon Resources Co.	Public Service Co. of NM	utility			5	10239	109.71
Peabody Coal Co.	Peabody Holding Co.	peabody			26	50678	1281.38
Perma Mining Corp.	Perma Resources Corp.	coal			1	90	0.00
Peter Kiewit Sons, Inc.	Peter Kiewit Sons, Inc.	other			1	524	40.00

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FEDERAL COAL LESSEES AND THEIR PARENT COMPANIES

LESSEE	PARENT #1	BUS. CAT.	PARENT #2	BUS. CAT.	LEASES	ACRES	RECOV. RES.
Phillips Petroleum Corp.	Phillips Petroleum Corp.	oil major			3	3580	268.00
Pitkin Iron Corp.	Pitkin Iron Corp.	m&m	NICOR, Inc.	nat gas	1	40	0.00
Powder River Coal Co.	Peabody Holding Co.	peabody			2	2600	95.00
Powderhorn Properties Co.	Eastern Gas & Fuel Associates	other	NICOR, Inc.	nat gas	6	8524	81.96
Rasmussen, A. & V.	Rasmussen, A. & V.	individ			1	40	0.15
Read, Edwin C.	Read, Edwin C.	individ			1	2560	0.00
Reese, Thomas E. & Dixie	Reese, Thomas E.	individ			1	80	0.00
Republic Steel Corp.	Republic Steel Corp.	steel			2	3536	9.50
Resource Development Co.	Pacific Power & Light Co.	utility			5	4311	130.00
Resource Exploration & Mining	Resource Exploration & Mining	coal			1	80	1.40
Riebold, P.	Riebold, P.	individ			1	1675	17.60
River Processing, Inc.	Reliance Group Holdings, Inc.	other			1	197	0.37
Rosebud Coal Sales Co.	Peter Kiewit Sons, Inc.	other			3	6481	35.96
Royal Land Co.	Standard Oil (Ohio) Co.	oil major			1	2571	67.14
Ruby Construction Co.	Ruby Construction Co.	other			1	146	1.40
Ryans Creek Coal Co.	Ryans Creek Coal Co.	coal			2	2240	5.30
Salt Creek Mining Co.	Occidental Petroleum Corp.	oil major	Colorado-Ute Electric Asso.	utility	6	14929	119.59
San Juan Coal Co.	Broken Hill Proprietary Ltd.	m&m			1	2044	60.00
Santa Fe Mining Co.	Santa Fe Industries, Co.	other			2	161	0.43
Shell Oil Corp.	Shell Oil Corp.	oil major			4	6827	641.50
Sheridan Enterprises, Inc.	Occidental Petroleum Corp.	oil major			1	160	0.65
Simmons, J.	Simmons, J.	individ			1	80	0.04
Smith & Peavley Co.	Smith & Peavley Co.	coal			1	1282	0.75
Smith-Holladay Associates	Smith-Holliday Associates	other			1	80	1.25
Snowmass Coal Co.	Eastern Gas & Fuel Associates	other	NICOR, Inc.	nat gas	2	4882	55.08
Soldier Creek Coal Co.	California Portland Cement Co.	oil major			1	400	0.00
Sorenson Resources Co.	Sorenson Resources Co.	other			3	6400	42.76
Spring Creek Coal Co.	Pacific Power & Light Co.	utility			1	2347	243.00
Stovall, Billy Gene	Stovall, Billy Gene	individ			1	521	0.72
Sunland Mining Corp.	Pyro Energy Co.	o&g			2	240	0.90
Sunoco Energy Development Co.	The Sun Co.	oil major			7	15148	643.62
Swanton Energy Resources Co.	Swanton Corp.	other			16	27658	360.77
Sweetwater Resources, Inc.	Monsanto Corp.	nrrd			2	16432	76.60
Texaco, Inc.	Texaco, Inc.	oil major			5	9417	800.50
Texas Energy Services, Inc.	Kaneb Services	other			1	4856	445.00
The Pacola Co.	The Pacola Co.	coal			1	960	0.00
Thermal Energy Co.	Washington Energy Co.	nat gas			1	2096	178.00
Thermal Energy Co.	Thermal Energy Co.	o&g			1	6336	38.44
Thompson Creek Coal & Coke Co.	Thompson Creek Coal & Coke Co.	coal			1	120	1.00
Thunder Basin Coal Co.	Atlantic Richfield Co.	oil major			3	11690	952.10
U.S. Steel Corp.	U.S. Steel Corp.	steel			19	20373	438.47
Union Pacific Corp.	Union Pacific Corp.	other	Hunt Enterprises	o&g	2	2568	17.90
United States Fuel Co.	Sharon Steel Corp.	steel			3	5726	36.20
Utah International, Inc.	Broken Hill Proprietary Ltd.	nrrd			25	23105	818.82
Utah Power & Light Co.	Utah Power & Light Co.	utility			15	28309	219.88
Valencia Energy Co.	Tucson Electric Company	utility			4	9311	109.71
W.A. Land Company	Houston Natural Gas Co.	nat gas			2	920	0.00

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FEDERAL COAL LESSEES AND THEIR PARENT COMPANIES

LESSEE	PARENT #1	BUS. CAT.	PARENT #2	BUS. CAT.	LEASES	ACRES	RECOV. RES.
W.K. Minerals, Inc.	Diamond Shamrock Corp.	nrrd			1	642	4.75
W.R. Grace & Co.	W.R. Grace & Co.	nrrd			1	3863	33.00
Wasatch Coal Co.	Wasatch Coal Co.	coal			1	280	0.34
Washington Irrigation & Develo	Washington Water Power Co.	utility			2	521	8.70
Weaver, H. & O.	Weaver, H. & O.	individ			1	80	0.30
Welch, E. & Wiggins, S.	Welch, E. & Wiggins, S.	individ			1	120	1.99
West, S.	West, S.	individ			1	961	12.60
Western Energy Co.	Montana Power Co.	utility			8	13003	286.40
Western Fuels-Utah, Inc.	Western Fuels Association	utility			5	6441	66.33
Western Slope Carbon, Inc.	Williams Companies	nat gas			4	1539	30.10
Wilberg, C.	Wilberg, C.	individ			1	80	0.35
Williams, Jerry	Williams, Jerry	individ			3	3012	10.97
Winton Coal Co.	Union Pacific Corp.	other			1	1645	12.50
Wyodak Resources Dev. Corp.	Black Hills Power & Light Co.	utility			6	2240	186.10
Wyoming Fuel Co.	K-N Energy, Inc.	nat gas			2	466	1.94

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FEDERAL COAL LESSEES
PARENT COMPANIES AND LEASEHOLDING SUBSIDIARIES

PARENT	LESSEE	BUS. CAT.	LEASES	ACRES	RECOV. RES.
AMCA Resources	AMCA Coal Leasing, Inc.	coal	6	2532	31.85
Abston Construction Co.	Abston Construction Co.	coal	1	638	1.17
Alabama Electric Coop.	Alabama Electric Coop.	utility	1	198	0.06
Alaska State Bank	Alaska State Bank	other	1	600	0.00
Amax, Inc.	Meadowlark Farms, Inc.	m&m	6	9038	1261.10
American Colloid Co.	American Colloid Co.	other	1	80	2.28
American Electric Power Co.	Blackhawk Coal Co.	utility	11	12698	250.00
American Electric Power Co.	Franklin Real Estate Co.	utility	1	634	3.35
American Minority Mining	American Minority Mining	other	1	400	1.80
Ametex Corp.	Ametex Corp.	other	2	280	0.49
Apex Mining Company, Inc.	Apex Mining Company, Inc.	coal	2	240	0.52
Arizona Public Service Co.	Malapai Resources Co.	utility	21	40276	345.23
Armco Steel Corp.	Evans Coal Co.	steel	11	17857	54.72
Ashland Oil Co.	Ark Land Co.	o&g	14	16223	61.34
Ashland Oil Co.	Medicine Bow Coal Co.	o&g	3	7011	17.90
Atlantic Richfield Co.	Atlantic Richfield Co.	oil major	3	7419	196.43
Atlantic Richfield Co.	Beaver Creek Coal Co.	oil major	7	5494	93.54
Atlantic Richfield Co.	Thunder Basin Coal Co.	oil major	3	11690	952.10
BankAmerica Corp.	Bank of America	other	4	6872	135.59
Basin Cooperative Services	Basin Cooperative Services	utility	3	2425	28.10
Bass, R. & Bass Trusts	Bass, R. & Bass Trusts	other	1	20701	242.10
Baukol-Noonan, Inc.	Baukol-Noonan, Inc.	coal	1	2325	40.63
Bell, J.	Bell, J.	individ	1	80	0.05
Bishopsgate Coal Corp.	Bishopsgate Coal Corp.	coal	1	161	0.84
Black Hills Power & Light Co.	Wyodak Resources Dev. Corp.	utility	6	2240	186.10
Bonsness, L.	Bonsness, L.	individ	1	80	0.16
Brigham Young University	Brigham Young University	other	3	277	1.54
Broken Hill Proprietary Ltd.	Energy Reserves Group, Inc.	m&m	4	7849	51.70
Broken Hill Proprietary Ltd.	San Juan Coal Co.	m&m	1	2044	60.00
Broken Hill Proprietary Ltd.	Utah International, Inc.	nrrd	25	23105	818.82
Bugni, A.	Bugni, A.	individ	1	80	0.00
Bugni, A. & T.	Bugni, T. & R.	individ	1	80	0.00
COP Coal Development Co.	COP Coal Development Co.	coal	2	1480	19.39
CPS Mining Co, Inc.	CPS Mining Co, Inc.	other	1	538	0.30
California Portland Cement Co.	California Portland Cement Co.	other	1	1548	21.36
California Portland Cement Co.	Soldier Creek Coal Co.	oil major	1	400	0.00
Cameron Coal Co.	Cameron Coal Co.	coal	3	4464	14.83
Capital Development Co.	Capital Development Co.	other	1	1832	7.80
Cari International Mining Corp	Cari International Mining Corp	other	1	360	1.31
Carroll County Coal Co.	Carroll County Coal Co.	other	1	412	18.38
Centurion Trust	Kerr Coal Co.	other	1	770	4.90
Chapman, R.	Chapman, R.	individ	1	1675	17.60
Chevron Corp.	Chevron Coal Development Co.	oil major	1	674	110.00
Chevron Corp.	Gulf Oil Corp.	oil major	40	58866	803.74
China Butte Coal Co.	China Butte Coal Co.	other	1	5974	62.73
Colorado-Ute Electric Asso.	Salt Creek Mining Co.	utility	6	14929	119.59
Commonwealth Edison	Edison Development Co.	utility	1	7066	103.00
Corp. of the Presiding Bishop	Corp. of the Presiding Bishop	other	3	3045	0.00
Crane Co.	CF&I Steel Corp.	other	1	3470	5.40

FEDERAL COAL LESSEES
PARENT COMPANIES AND LEASEHOLDING SUBSIDIARIES

PARENT	LESSEE	BUS. CAT.	LEASES	ACRES	RECOV. RES.
Cravat Coal Co.	Conotton Land Co.	coal	2	400	1.50
Damson Oil Corp.	Dorchester Coal Co.	o&g	3	14729	117.70
Davis, R.	Davis, R.	other	1	40	0.07
Denton, C.	Denton, C.	individ	1	80	0.30
Diamond Shamrock Corp.	W.K. Minerals, Inc.	nrrd	1	642	4.75
Divide Coal Mining Co.	Divide Coal Mining Co.	coal	1	80	0.80
DuPont	Consol Land Development	nrrd	1	1895	48.70
DuPont	Consolidation Coal Co.	nrrd	34	57531	1086.24
Eastern Gas & Fuel Associates	Eastern Coal Properties, Inc.	other	1	1910	33.62
Eastern Gas & Fuel Associates	Grand Mesa Properties Co.	other	2	1266	20.46
Eastern Gas & Fuel Associates	Powderhorn Properties Co.	other	6	8524	81.96
Eastern Gas & Fuel Associates	Snowmass Coal Co.	other	2	4882	55.08
Emery Energy, Inc.	Emery Energy, Inc.	coal	1	3795	20.30
Equipment Rental Service	Equipment Rental Service	other	1	480	0.00
Exxon Corp.	Exxon Coal Resources USA, Inc.	oil major	2	2200	0.00
Exxon Corp.	Exxon Coal USA	oil major	3	11057	1489.80
FMC Corp.	FMC Corp.	nrrd	2	3201	11.50
Farrell Cooper Mining Co.	Farrell Cooper Mining Co.	coal	6	10246	34.08
Files, Jerry A.	Files, Jerry A.	individ	1	521	0.72
Fluor Corp.	Anchor Coal Co.	other	1	280	5.34
Frandsen G.	Frandsen, G.	individ	1	40	0.42
Frontier Coal Co. USA	Fort Union Mine Partnership	o&g	1	1913	115.00
Fulton, C.	Fulton, C.	individ	1	80	0.30
Gaither, K.	Gaither, K.	individ	1	2557	6.48
Gaither, Kenneth R.	Gaither, Kenneth R.	individ	1	5707	12.60
Garland Coal & Mining Co.	Garland Coal & Mining Co.	coal	4	3084	8.60
General Dynamics Corp.	Freeman-United Mining Co.	nrrd	1	561	0.00
General Dynamics Corp.	Material Service Corp.	nrrd	2	4842	18.30
General Electric Corp.	General Electric Holdings, Inc	nrrd	3	5290	0.00
Gent's Flying Enterprises	Gent's Flying Enterprises	other	2	160	1.75
Geo Resources Exploration, Inc	Geo Resources Exploration, Inc	other	1	320	0.69
Granite Creek Coal & Uranium	Granite Creek Coal & Uranium	other	1	280	0.20
Great National Corp.	Great National Corp.	other	1	140	0.14
HFCO, Inc.	HFCO, Inc.	coal	1	98	0.09
Hall, H.	Hall, H.	individ	1	880	0.28
Hamilton Bros. Jt. Venture	Carbon Coal	o&g	1	160	0.48
Hanna Mining Corp.	Colowyo Coal Co.	m&m	2	2590	146.70
Hanna Mining Corp.	Hayden Gulch West Coal Co.	m&m	1	5298	63.64
Hiko Bell Mining & Oil Co.	Hiko Bell Mining & Oil Co.	o&g	3	6400	42.76
Houston Natural Gas Co.	W.A. Land Company	nat gas	2	920	0.00
Hunt Enterprises	Ark Land Co.	o&g	14	16223	61.34
Hunt Enterprises	Medicine Bow Coal Co.	o&g	3	7011	17.90
Hunt Enterprises	Union Pacific Corp.	o&g	2	2568	17.90
Idaho Power Co.	Bridger Coal Co.	utility	3	8436	329.80
Ideal Basic Industries, Inc.	IBI Coal Co.	other	5	9306	55.88
Ingraham, F.	Ingraham, F.	individ	1	160	0.14
Intermountain Exploration Co.	Intermountain Exloration Co.	m&m	1	160	0.00
Internorth Corp.	Belco Petroleum Corp.	nat gas	1	4551	215.80
Internorth Corp.	Northern Minerals Co.	nat gas	5	3262	48.32

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FEDERAL COAL LESSEES
PARENT COMPANIES AND LEASEHOLDING SUBSIDIARIES

PARENT	LESSEE	BUS. CAT.	LEASES	ACRES	RECOV. RES.
Iowa Public Service Co.	Energy Development Co.	utility	1	8683	6.90
Israel, J.J.	Israel, J.J.	individ	1	80	0.07
Jennings, James Sanders	Jennings, James Sanders	individ	1	40	0.[illegible]
Johnson, G. & A.	Johnson, G. & A.	individ	1	80	0.20
K & R Coal Co.	Bokoshe Coal Company	coal	1	80	0.13
K&R Coal Co.	K&R Coal Co.	coal	1	1180	5.09
K-N Energy, Inc.	North Central Energy Co.	nat gas	1	962	17.05
K-N Energy, Inc.	Wyoming Fuel Co.	nat gas	2	466	1.94
Kaiser Steel Corp.	Kaiser Steel Corp.	steel	10	15093	86.58
Kaneb Services	LEECO	other	1	362	0.60
Kaneb Services	Texas Energy Services, Inc.	other	1	4856	445.00
Kerr-McGee Corp.	Kerr-McGee Coal Co.	o&g	5	8695	735.70
King Cannel Coal Co.	King Cannel Coal Co.	other	1	240	1.18
Kingston, C. & J.	Kingston, C. & J.	individ	1	120	1.45
Kukuchka, C. & W.	Kukuchka, C. & W.	individ	1	40	0.00
Lombardi, P.	Lombardi, P.	individ	1	80	0.08
Loveless, Robert M.	Loveless, Robert M.	individ	1	2560	0.00
Martin, J., trustee	Martin, J., trustee	other	1	40	0.17
Martinez, A.	Martinez, A.	individ	1	40	0.14
McKinnon Marital & Resid. Tr.	McKinnon Trusts	other	5	8672	96.52
Mid-Continent Resources Corp.	Mid-Continent Resources Corp.	coal	9	7479	62.50
Mobil Corp.	Mobil Coal Resources Co.	oil major	2	3959	424.50
Monolith Portland Cement Co.	Monolith Portland Cement Co.	other	1	173	9.43
Monsanto Corp.	Sweetwater Resources, Inc.	nrrd	2	16432	76.60
Montana Power Co.	Northwestern Resources Co.	utility	1	120	0.90
Montana Power Co.	Western Energy Co.	utility	8	13003	286.40
Montana-Dakota Utilities	Knife River Coal Co.	utility	6	9024	145.03
Mountain States Resource Corp.	Mountain States Resource Corp.	other	2	11387	103.37
NICOR, Inc.	Grand Mesa Properties Co.	nat gas	2	1266	20.46
NICOR, Inc.	Pitkin Iron Corp.	nat gas	1	40	0.00
NICOR, Inc.	Powderhorn Properties Co.	nat gas	6	8524	81.96
NICOR, Inc.	Snowmass Coal Co.	nat gas	2	4882	55.08
National King Coal	National King Coal Co.	coal	1	160	2.44
National King Coal	National King Coal, Inc.	coal	1	180	0.00
Nevada Power Co.	Nevada Electric Investment Co.	utility	8	10375	0.00
Norm & Co.	Howe Coal Co.	other	6	12439	30.43
North American Coal Corp.	Coteau Properties, Inc.	coal	3	3198	60.20
North American Coal Corp.	Falkirk Mining Co.	coal	1	160	2.14
North American Coal Corp.	Helen Mining Co.	coal	2	81	0.18
North American Coal Corp.	North American Coal Co.	coal	3	2178	3.53
Northwest Industries. Inc.	Lone Star Steel Co.	other	8	11090	17.84
Northwest Mutual Life Ins. Co.	Northwest Mutual Life Ins. Co.	other	1	4856	445.00
Occidental Petroleum Corp.	Salt Creek Mining Co.	oil major	6	14929	119.59
Occidental Petroleum Corp.	Sheridan Enterprises, Inc.	oil major	1	160	0.65
Pacific Power & Light Co.	Antelope Coal Co.	utility	2	4777	266.70
Pacific Power & Light Co.	Bridger Coal Co.	utility	3	8436	329.80
Pacific Power & Light Co.	Decker Coal Co.	utility	5	14771	374.50
Pacific Power & Light Co.	Eden Ridge Coal Co.	utility	2	4874	30.00
Pacific Power & Light Co.	Pacific Power & Light Co.	utility	13	14262	78.65

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FEDERAL COAL LESSEES
PARENT COMPANIES AND LEASEHOLDING SUBSIDIARIES

PARENT	LESSEE	BUS. CAT.	LEASES	ACRES	RECOV. RES.
Pacific Power & Light Co.	Resource Development Co.	utility	5	4311	130.00
Pacific Power & Light Co.	Spring Creek Coal Co.	utility	1	2347	243.00
Padilla, F.	Padilla, F.	individ	2	160	0.78
Panhandle Eastern Pipeline Co.	North Antelope Coal Co.	nat gas	2	1360	132.15
Peabody Holding Co.	North Antelope Coal Co.	peabody	2	1360	132.15
Peabody Holding Co.	Peabody Coal Co.	peabody	26	50678	1281.38
Peabody Holding Co.	Powder River Coal Co.	peabody	2	2600	95.00
Perma Resources Corp.	Perma Mining Corp.	coal	1	90	0.00
Peter Kiewit Sons, Inc.	Big Horn Coal Co.	other	2	440	27.80
Peter Kiewit Sons, Inc.	Black Butte Coal Co.	other	1	14902	74.00
Peter Kiewit Sons, Inc.	Cumberland Coal Co.	other	1	1408	29.70
Peter Kiewit Sons, Inc.	Decker Coal Co.	other	5	14771	374.50
Peter Kiewit Sons, Inc.	Montana Royalty Co.	other	1	40	0.00
Peter Kiewit Sons, Inc.	Peter Kiewit Sons, Inc.	other	1	524	40.00
Peter Kiewit Sons, Inc.	Rosebud Coal Sales Co.	other	3	6481	35.96
Petroleum International, Inc.	P.I.I. West Ltd.	o&g	2	6182	12.11
Phillips Petroleum Corp.	Phillips Petroleum Corp.	oil major	3	3580	268.00
Pitkin Iron Corp.	Mid-Continent Limestone Co.	m&m	3	2020	14.54
Pitkin Iron Corp.	Pitkin Iron Corp.	m&m	1	40	0.00
Pittston Coal Co.	Clinchfield Coal	coal	1	251	0.30
Property Holding Co. of Albuqu	Carbon Coal	other	1	160	0.48
Public Service Co. of NM	Paragon Resources Co.	utility	5	10239	109.71
Pyro Energy Co.	Sunland Mining Corp.	o&g	2	240	0.90
Quaker State Oil Refining Co.	Kanawha Hocking Coal & Coke	o&g	6	8767	347.22
Ranchers Energy Co.	Neil Butte Co.	other	1	3238	170.00
Rasmussen, A. & V.	Rasmussen, A. & V.	individ	1	40	0.15
Read, Edwin C.	Read, Edwin C.	individ	1	2560	0.00
Reese, Thomas E.	Reese, Thomas E. & Dixie	individ	1	80	0.00
Reliance Group Holdings, Inc.	River Processing, Inc.	other	1	197	0.37
Republic Steel Corp.	Republic Steel Corp.	steel	2	3536	9.50
Resource Exploration & Mining	Resource Exploration & Mining	coal	1	80	1.40
Riebold, P.	Riebold, P.	individ	1	1675	17.60
Ruby Construction Co.	Ruby Construction Co.	other	1	146	1.40
Ryans Creek Coal Co.	Ryans Creek Coal Co.	coal	2	2240	5.30
San Diego Gas & Electric Co.	New Albion Resources Co.	utility	21	40276	345.23
Santa Fe Industries, Co.	Santa Fe Mining Co.	other	2	161	0.43
Sharon Steel Corp.	United States Fuel Co.	steel	3	5726	36.20
Shell Oil Corp.	Shell Oil Corp.	oil major	4	6827	641.50
Simmons, J.	Simmons, J.	individ	1	80	0.04
Smith & Peavley Co.	Smith & Peavley Co.	coal	1	1282	0.75
Smith-Holliday Associates	Smith-Holladay Associates	other	1	80	1.25
Sorenson Resources Co.	Sorenson Resources Co.	other	3	6400	42.76
Sourthern California Edison	Mono Power Co.	utility	21	40276	345.23
Standard Equipment, Inc.	Mining Systems Corp.	other	1	680	0.32
Standard Oil (Ohio) Co.	Royal Land Co.	oil major	1	2571	67.14
Standard Oil of Indiana. Co.	Empire Energy Corp.	oil major	4	1133	29.40
Stovall, Billy Gene	Stovall, Billy Gene	individ	1	521	0.72
Swanton Corp.	Swanton Energy Resources Co.	other	16	27658	360.77

FEDERAL COAL LESSEES
PARENT COMPANIES AND LEASEHOLDING SUBSIDIARIES

PARENT	LESSEE	BUS. CAT.	LEASES	ACRES	RECOV. RES.
Texaco, Inc.	Colorado Yampa Coal Co.	oil major	1	274	0.73
Texaco, Inc.	Getty Minerals Marketing, Inc.	oil major	7	6710	75.00
Texaco, Inc.	Getty Mining Co.	oil major	4	3929	51.00
Texaco, Inc.	Texaco, Inc.	oil major	5	9417	800.50
Texas Eastern Transmission	Fannin Square Corp.	nat gas	1	1910	33.62
The Coastal Corp.	Coastal States Energy Co.	nat gas	10	13299	78.30
The Pacola Co.	The Pacola Co.	coal	1	960	0.00
The Sun Co.	Greenwood Land Mining Co.	oil major	1	409	0.26
The Sun Co.	Sunoco Energy Development Co.	oil major	7	15148	643.62
Thermal Energy Co.	Thermal Energy Co.	o&g	1	6336	38.44
Thompson Creek Coal & Coke Co.	Thompson Creek Coal & Coke Co.	coal	1	120	1.00
Tucson Electric Company	Valencia Energy Co.	utility	4	9311	109.71
U.S. Steel Corp.	U.S. Steel Corp.	steel	19	20373	438.47
Union Pacific Corp.	Black Butte Coal Co.	other	1	14902	74.00
Union Pacific Corp.	Cumberland Coal Co.	other	1	1408	29.70
Union Pacific Corp.	Union Pacific Corp.	other	2	2568	17.90
Union Pacific Corp.	Winton Coal Co.	other	1	1645	12.50
Utah Power & Light Co.	Utah Power & Light Co.	utility	15	28309	219.88
W.R. Grace & Co.	Colowyo Coal Co.	nrrd	2	2590	146.70
W.R. Grace & Co.	Hayden Gulch West Coal Co.	nrrd	1	5298	63.64
W.R. Grace & Co.	W.R. Grace & Co.	nrrd	1	3863	33.00
Wasatch Coal Co.	Wasatch Coal Co.	coal	1	280	0.34
Washington Energy Co.	Thermal Energy Co.	nat gas	1	2096	178.00
Washington Water Power Co.	Washington Irrigation & Develo	utility	2	521	8.70
Weaver, H. & O.	Weaver, H. & O.	individ	1	80	0.30
Welch, E. & Wiggins, S.	Welch, E. & Wiggins, S.	individ	1	120	1.99
West, S.	West, S.	individ	1	961	12.60
Western Fuels Association	Western Fuels-Utah, Inc.	utility	5	6441	66.33
Westhoff Brothers, Inc.	P.I.I. West Ltd.	other	2	6182	12.11
Westmoreland Coal Co.	Colorado Westmoreland, Inc.	coal	4	6443	46.91
Wilberg, C.	Wilberg, C.	individ	1	80	0.35
Williams Companies	Northwest Carbon Co.	nat gas	1	400	14.25
Williams Companies	Western Slope Carbon, Inc.	nat gas	4	1539	30.10
Williams, Jerry	Williams, Jerry	individ	3	3012	10.97

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AK	F04923	Alaska State Bank	09/18/47	600	UP	Alaska State Bank	100	1	/ /	ind	08/04/86	00
AK	F014996	Read PRLA	03/22/83	2560	UN	Read, Edwin C.	50	3	03/22/83	den	03/22/93	00
AL	ES12284	North River	06/01/74	2338	AA	Republic Steel Corp.	100	1	06/01/74	den	08/04/86	00
AL	ES26901	North River	02/01/82	1198	AA	Gulf Oil Corp.	50	2	02/01/82	den	02/01/92	00
AL	ES27219	Brannon Creek	01/01/83	479	00	Ark Land Co.	100	1	01/01/83	den	01/01/93	00
AL	ES27221	Dividingridge	11/01/82	638	00	Abston Construction Co.	100	1	11/01/82	den	11/01/92	00
AL	ES27220	Elm Grove	03/01/82	80	00	Israel, J.J.	100	1	03/01/82	den	03/01/92	00
AL	ES27227	Flatwoods	03/01/83	478	00	Williams, Jerry	100	1	03/01/83	den	03/01/93	00
AL	ES26900	Goodwin Creek	01/01/82	201	00	Apex Mining Company, Inc.	100	1	01/01/82	den	01/01/92	00
AL	ES27228	Howard	07/01/82	822	00	Ark Land Co.	100	1	07/01/82	den	07/01/92	00
AL	ES27218	Jess Creek	07/01/82	1972	00	Williams, Jerry	100	1	07/01/82	den	07/01/92	00
AL	ES27217	Piney Woods Church	07/01/82	198	00	Alabama Electric Coop.	100	1	07/01/82	den	07/01/92	00
AL	ES27072	Rock Springs Church	01/01/82	3480	00	U.S. Steel Corp.	100	1	01/01/82	den	01/01/92	00
AL	ES16968	Stovall-Files	06/01/80	521	00	Files, Jerry A.	50	2	06/01/80	den	06/01/90	00
AL	ES27222	Tyro Creek	03/01/83	562	00	Williams, Jerry	100	1	03/01/83	den	03/01/93	00
AL	ES26902	Upper North River	01/01/82	40	00	Jennings, James Sanders	100	1	01/01/82	den	01/01/92	00
AL	ES26904	Upper Sulfur Springs Chur	01/01/82	39	00	Apex Mining Company, Inc.	100	1	01/01/82	den	01/01/92	00
CA	S032582	Reese	09/09/43	80	UP	Reese, Thomas E. & Dixie	100	2	/ /	den	08/04/86	NU
CO	C0127592	Apex No.2	10/01/66	80	AA	Sunland Mining Corp.	100	1	10/01/66	den	08/04/86	YM
CO	D046544	Apex No.2	12/03/37	160	AA	Sunland Mining Corp.	100	1	01/01/77	ind	01/01/87	YM
CO	C01538	Cameo	06/01/51	2560	AA	Powderhorn Properties Co.	100	1	12/01/84	ind	12/01/94	YM
CO	C27931	Canadian Strip	03/01/80	90	AI	Wyoming Fuel Co.	100	1	03/01/80	den	03/01/90	00
CO	C31805	Canadian Strip	11/01/81	376	AI	Wyoming Fuel Co.	100	1	11/01/81	den	11/01/91	00
CO	C34886	Chimney Rock	10/01/83	90	AA	Perma Mining Corp.	100	1	10/01/83	den	10/01/93	00
CO	C12640	Coal Basin	05/01/66	1529	AA	Mid-Continent Resources Corp.	100	1	05/01/71	seg	08/04/86	YM
CO	C0115606	Coal Basin	01/01/65	80	AA	Mid-Continent Resources Corp.	100	1	01/01/65	den	08/04/86	YM
CO	C011646	Coal Basin	10/01/58	957	AA	Mid-Continent Resources Corp.	100	1	05/01/74	ind	08/04/86	YM
CO	C0125456	Coal Basin	04/01/61	80	AA	Mid-Continent Resources Corp.	100	1	07/01/65	seg	08/04/86	YM
CO	C030345	Coal Basin	04/01/61	117	AA	Mid-Continent Resources Corp.	100	1	05/01/71	ind	08/04/86	YM
CO	C074632	Coal Basin	12/01/66	680	AA	Mid-Continent Resources Corp.	100	1	12/01/66	den	08/04/86	YM
CO	C0125457	Coal Basin	10/01/58	1142	AA	Mid-Continent Resources Corp.	100	1	07/01/65	seg	08/04/86	YM
CO	C09004	Coal Basin	05/01/61	1529	AA	Mid-Continent Resources Corp.	100	1	05/01/61	den	08/04/86	YM
CO	C09005	Coal Basin	11/01/58	1365	AA	Mid-Continent Resources Corp.	100	1	11/01/58	den	08/04/86	YM
CO	D036906	Colby Red Canyon	04/01/24	41	AN	Powderhorn Properties Co.	100	1	07/01/82	ind	07/01/92	QM
CO	D034365	Colowyo Strip	10/25/24	2545	AA	Colowyo Coal Co.	100	1	12/01/73	par	08/04/86	YM
CO	C35874	Colowyo Strip	07/01/81	45	AA	Colowyo Coal Co.	100	1	07/01/81	den	07/01/91	00
CO	C020740	Cottonwood Creek/Cameo	10/01/58	40	AA	Powderhorn Properties Co.	34	2	12/01/84	ind	08/04/86	YM
CO	C029889	Cottonwood Creek/Cameo	11/01/64	2522	AA	Powderhorn Properties Co.	100	1	12/01/84	ind	12/01/94	YM
CO	C024998	Cottonwood Creek/Cameo	10/01/63	2551	AA	Powderhorn Properties Co.	100	1	12/01/84	ind	12/01/94	YM
CO	D047201	Deserado	07/25/36	513	AA	Western Fuels-Utah, Inc.	100	1	12/01/83	ind	12/01/93	YL
CO	C023703	Deserado	03/01/63	2557	AA	Western Fuels-Utah, Inc.	100	1	06/01/81	ind	06/01/91	YL

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CO	C8424	Deserado	06/01/82	2552	AA	Western Fuels Utah, Inc.	100	1	06/01/82	den	06/01/92	OO
CO	C0126669	Deserado	08/01/82	259	AA	Western Fuels Utah, Inc.	100	1	08/01/82	den	08/01/92	OO
CO	C8425	Deserado	06/01/82	560	AA	Western Fuels Utah, Inc.	100	1	06/01/82	den	06/01/92	OO
CO	C0126480	Eagle Complex	01/01/66	367	AA	Empire Energy Corp.	100	1	02/01/76	ind	08/04/86	YM
CO	C0127865	Eagle Complex	01/01/66	43	AA	Empire Energy Corp.	100	1	04/01/72	ind	08/04/86	YM
CO	D056298	Eagle Complex	12/01/49	41	AA	Empire Energy Corp.	100	1	04/01/72	ind	08/04/86	YM
CO	C30656	Eagle Complex	07/01/81	682	AA	Empire Energy Corp.	100	1	07/01/81	den	07/01/91	OO
CO	C021601	Edna Strip	06/01/62	827	AA	Gulf Oil Corp.	100	1	06/01/62	den	08/04/86	YM
CO	D033327	Edna Strip	04/23/25	280	AA	Gulf Oil Corp.	100	1	04/01/62	ind	08/04/86	YM
CO	D041478	Edna Strip	05/06/30	80	AA	Gulf Oil Corp.	100	1	04/01/62	ind	08/04/86	YM
CO	D053710	Edna Strip	06/10/47	89	AA	Gulf Oil Corp.	100	1	07/01/62	ind	08/04/86	YM
CO	C0128433	Energy Fuels Complex	06/01/75	475	AA	Getty Minerals Marketing, Inc.	100	1	03/01/77	ind	03/01/87	YM
CO	C081330	Energy Fuels Complex	11/01/63	2215	AA	Getty Minerals Marketing, Inc.	100	1	03/01/77	ind	03/01/87	YM
CO	C16284	Energy Fuels Complex	07/01/78	263	AA	Getty Minerals Marketing, Inc.	100	1	07/01/78	den	07/01/88	OO
CO	C20900	Energy Fuels Complex	11/01/78	420	AA	Getty Minerals Marketing, Inc.	100	1	11/01/78	den	11/01/88	OO
CO	C22644	Energy Fuels Complex	07/01/79	1790	AA	Getty Minerals Marketing, Inc.	100	1	07/01/79	den	07/01/89	OO
CO	C22676	Energy Fuels Complex	09/01/79	402	AA	Getty Minerals Marketing, Inc.	100	1	09/01/79	den	09/01/89	OO
CO	D052547	Energy Fuels Complex	03/01/45	1145	AA	Getty Minerals Marketing, Inc.	100	1	09/01/77	ind	09/01/87	YM
CO	C17130	Hawksnest East	12/01/73	241	AI	Western Slope Carbon, Inc.	100	1	12/01/73	den	08/04/86	YM
CO	C27103	Hawksnest East	10/01/79	290	AI	Western Slope Carbon, Inc.	100	1	10/01/79	den	10/01/89	OO
CO	D042921	Hawksnest East	02/25/31	819	AI	Western Slope Carbon, Inc.	100	1	10/01/70	ind	08/04/86	YM
CO	D056724	Hawksnest East	12/01/50	189	AI	Western Slope Carbon, Inc.	100	1	05/01/70	ind	08/04/86	YM
CO	P058300	King Coal	09/11/41	160	AA	National King Coal Co.	100	1	02/01/78	ind	02/01/88	YM
CO	C0125436	Loma Complex	05/01/68	2446	AI	Salt Creek Mining Co.	100	1	01/01/78	ind	01/01/88	QM
CO	C0125437	Loma Complex	05/01/68	2357	AI	Salt Creek Mining Co.	100	1	01/01/78	ind	01/01/88	QM
CO	C0125438	Loma Complex	05/01/68	2560	AI	Salt Creek Mining Co.	100	1	01/01/78	ind	01/01/88	QM
CO	C0125439	Loma Complex	05/01/68	2483	AI	Salt Creek Mining Co.	100	1	01/01/78	ind	01/01/88	QM
CO	C0125515	Loma Complex	05/01/68	2560	AI	Salt Creek Mining Co.	100	1	01/01/78	ind	01/01/88	QM
CO	C0125516	Loma Complex	05/01/68	2523	AI	Salt Creek Mining Co.	100	1	01/01/78	ind	01/01/88	QM
CO	C22777	Marr	07/01/80	770	AA	Kerr Coal Co.	100	1	07/01/80	den	07/01/90	OO
CO	C1545	Meeker Area	09/01/67	896	AI	Northern Minerals Co.	100	1	06/01/79	ind	06/01/89	YM
CO	C28358	Meeker Area	06/01/67	886	AI	Northern Minerals Co.	100	1	06/01/79	seg	06/01/89	YM
CO	C28359	Meeker Area	06/01/67	1000	AI	Northern Minerals Co.	100	1	09/01/79	seg	06/01/89	YM
CO	C076713	Meeker Area	02/01/66	320	AI	Northern Minerals Co.	100	1	12/01/79	ind	12/01/89	YM
CO	D044240	Meeker Area	01/12/33	160	AI	Northern Minerals Co.	100	1	12/01/79	ind	12/01/89	YM
CO	C0117192	Mt. Gunnison	06/01/65	1243	AA	Atlantic Richfield Co.	100	1	03/11/69	ind	08/04/86	YM
CO	C1362	Mt. Gunnison	09/01/67	4836	AA	Atlantic Richfield Co.	100	1	09/01/67	den	08/04/86	YM
CO	D044569	Mt. Gunnison	08/30/34	1340	AA	Atlantic Richfield Co.	100	1	04/01/71	ind	08/04/86	YM
CO	C08172	N. Thompson Creek	06/01/58	2413	AN	Snowmass Coal Co.	100	1	08/01/80	ind	08/01/90	NM
CO	C08173	N. Thompson Creek	06/01/58	2469	AN	Snowmass Coal Co.	100	1	08/01/80	ind	08/01/90	NM
CO	C29125	National King Coal	11/01/81	180	AA	National King Coal, Inc.	100	1	11/01/81	den	11/01/91	OO

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CO	C069942	Ohio Creek No.2	04/01/62	80	AA	Weaver, H. & O.	100	1	05/01/76	ind	08/04/86	YM
CO	C25079	Orchard Valley	03/01/78	310	AA	Colorado Westmoreland, Inc.	100	1	03/01/78	den	03/01/88	OO
CO	C27432	Orchard Valley	09/01/79	854	AA	Colorado Westmoreland, Inc.	100	1	09/01/79	den	09/01/89	OO
CO	C37210	Orchard Valley	05/01/84	4999	AA	Colorado Westmoreland, Inc.	100	1	05/01/84	den	05/01/94	OO
CO	C078049	Roadside	08/01/66	810	AA	Powderhorn Properties Co.	100	1	12/01/84	ind	12/01/94	YM
CO	C19885	Seneca 2	06/01/79	125	AA	Peabody Coal Co.	100	1	06/01/79	den	06/01/89	YM
CO	C088199	Seneca 2	07/01/63	2280	AA	Peabody Coal Co.	100	1	07/01/63	den	08/04/86	YM
CO	C086654	Seneca 2 (#7)	07/01/63	160	AA	Peabody Coal Co.	100	1	07/01/63	den	08/04/86	YM
CO	C033301	Somerset	01/07/60	625	AA	U.S. Steel Corp.	100	1	07/01/60	den	08/04/86	YM
CO	C033302	Somerset	07/01/64	1548	AA	U.S. Steel Corp.	100	1	03/15/60	den	08/04/86	YM
CO	D052504	Somerset	08/19/44	3470	AA	U.S. Steel Corp.	100	1	03/01/56	ind	08/04/86	YM
CO	C36446	Somerset	05/01/84	79	AA	U.S. Steel Corp.	100	1	05/01/84	den	05/01/94	OO
CO	C25948	Trapper	06/01/80	85	AA	Utah International, Inc.	100	1	06/01/80	den	06/01/90	YM
CO	C07518	Trapper	06/01/58	2566	AA	General Electric Holdings, Inc	100	1	06/01/58	den	08/04/86	YM
CO	C07519	Trapper	06/01/58	1372	AA	General Electric Holdings, Inc	100	1	06/01/58	den	08/04/86	YM
CO	C079641	Trapper	10/01/62	1352	AA	General Electric Holdings, Inc	100	1	10/01/62	den	08/04/86	YM
CO	C813	Trapper	04/01/70	160	AA	Utah International, Inc.	100	1	03/01/70	den	08/04/86	YM
CO	C0127833	Fruita	07/01/81	5087	PN	Dorchester Coal Co.	100	1	07/01/81	den	07/01/91	OO
CO	C0127832	Fruita	07/01/81	4522	PN	Dorchester Coal Co.	100	1	07/01/81	den	07/01/91	OO
CO	C0127834	Fruita	07/01/81	5120	PN	Dorchester Coal Co.	100	1	07/01/81	den	07/01/91	OO
CO	C081251	Seneca 2W	05/01/65	2519	PN	Material Service Corp.	100	1	05/01/65	den	08/04/86	QM
CO	C081258	Seneca 2W	05/01/65	2323	PN	Material Service Corp.	100	1	05/01/65	den	08/04/86	QM
CO	C0114093	Seneca 2W	05/01/64	1320	PN	Peabody Coal Co.	100	1	05/01/64	den	08/04/86	QM
CO	C0112685	Denver Basin	12/01/67	640	R	Peabody Coal Co.	100	1	/ /	rel	/ /	OO
CO	C0112686	Denver Basin	12/01/67	640	R	Peabody Coal Co.	100	1	/ /	rel	/ /	OO
CO	C0112687	Denver Basin	12/01/67	644	R	Peabody Coal Co.	100	1	/ /	rel	/ /	OO
CO	C0126477	Denver Basin	12/01/67	760	R	Peabody Coal Co.	100	1	/ /	rel	/ /	OO
CO	D057166	Jackson Co.	06/21/51	173	R	Monolith Portland Cement Co.	100	1	/ /	rel	/ /	OO
CO	C012765	Thompson Creek	06/01/60	498	R	Garland Coal & Mining Co.	100	1	/ /	rel	/ /	OO
CO	C012894	Cardinal	02/01/56	634	UP	Franklin Real Estate Co.	100	1	06/01/75	ind	08/04/86	NU
CO	C028875	Chapman & Riebold	11/01/31	1675	UN	Riebold, P.	50	2	06/01/74	par	08/04/86	NM
CO	C0125485	Coal Basin West(#28)	01/01/65	200	UN	U.S. Steel Corp.	100	1	07/01/65	seg	08/04/86	NM
CO	C030344	Coal Basin West(#28)	05/01/60	517	UN	U.S. Steel Corp.	100	1	05/01/60	den	08/04/86	NM
CO	C12638	Coal Basin West(#28)	01/01/65	315	UN	U.S. Steel Corp.	100	1	05/01/71	den	08/04/86	NM
CO	C12639	Coal Basin West(#28)	12/01/66	800	UN	U.S. Steel Corp.	100	1	05/01/71	den	08/04/86	NM
CO	C1894	Coal Basin West(#28)	12/01/66	120	UN	U.S. Steel Corp.	100	1	06/01/67	seg	08/04/86	NM
CO	C7852	Coal Basin West(#28)	12/01/66	160	UN	U.S. Steel Corp.	100	1	11/01/68	seg	08/04/86	NM
CO	C030346	Coal Basin West(#28)	05/01/60	640	UN	U.S. Steel Corp.	100	1	05/01/60	den	08/04/86	NM
CO	C7853	Coal Basin West(#28)	01/01/65	717	UN	U.S. Steel Corp.	100	1	11/01/68	seg	08/04/86	NM
CO	C037277	Coal Canyon	10/01/62	1471	UP	Mid-Continent Limestone Co.	100	1	10/01/62	den	08/04/86	NM
CO	C059420	Coal Canyon	10/01/65	308	UN	Mid-Continent Limestone Co.	100	1	01/01/69	den	08/04/86	NM

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CO	D040389	Coal Canyon	05/21/32	241	UP	Mid-Continent Limestone Co.	100	1	01/01/66	ind	08/04/86	NM
CO	C0123476	Danforth Hills	12/01/66	2252	UN	Utah International, Inc.	100	1	12/01/66	den	08/04/86	NM
CO	C093713	Danforth Hills #12	06/01/67	2518	UN	Consolidation Coal Co.	100	1	09/01/72	ind	08/04/86	NM
CO	C093716	Danforth Hills #12	06/01/67	2061	UN	Consolidation Coal Co.	100	1	09/01/72	ind	08/04/86	NM
CO	C245	Danforth Hills #13	01/11/66	226	UN	Consolidation Coal Co.	100	1	09/01/72	ind	08/04/86	NM
CO	C1546	Danforth Hills #14	09/01/67	1097	UN	Consolidation Coal Co.	100	1	09/01/72	ind	08/04/86	NM
CO	C093714	Danforth Hills #15	06/01/67	571	UN	Consolidation Coal Co.	100	1	09/01/72	ind	08/04/86	NM
CO	C093715	Danforth Hills #15	06/01/67	760	UN	Consolidation Coal Co.	100	1	09/01/72	ind	08/04/86	NM
CO	C29224	Danforth Hills NP #1	07/01/81	876	UN	Consolidation Coal Co.	100	1	07/01/81	den	07/01/91	OO
CO	C29225	Danforth Hills NP #2	06/01/83	2368	UN	Utah International, Inc.	100	1	06/01/83	den	06/01/93	OO
CO	C29226	Danforth Hills NP #3	04/01/83	1895	UN	Consol Land Development	100	1	04/01/83	den	04/01/93	OO
CO	C0123475	Danforth Hills PRLA	05/01/82	2082	UN	Utah International, Inc.	100	1	05/01/82	den	05/01/92	OO
CO	C064416	Ferne James	01/01/66	40	UN	Martin, J., trustee	100	1	05/27/83	ind	05/27/93	NU
CO	C0125957	Grace (#5)	10/01/65	3863	UN	W.R. Grace & Co.	100	1	12/01/79	ind	12/01/89	NM
CO	C29221	Grassy Creek	05/01/82	400	UN	American Minority Mining	100	1	05/01/82	den	05/01/92	OO
CO	D055156	Green Valley	10/18/48	174	UP	Grand Mesa Properties Co.	100	1	07/01/82	ind	07/01/92	NU
CO	D037766	Gunnison (#26)	11/05/27	120	UN	Thompson Creek Coal & Coke Co.	100	1	11/01/54	ind	08/04/86	NU
CO	D043937	Harvey Gap	04/05/32	120	UP	Welch, E. & Wiggins, S.	100	1	12/19/73	ind	08/04/86	NU
CO	C29217	Hayden Gulch	07/01/83	5298	UN	Hayden Gulch West Coal Co.	100	1	07/01/83	den	07/01/93	OO
CO	C030472	Jackson Co.	07/01/60	120	UN	AMCA Coal Leasing, Inc.	100	1	07/01/79	ind	07/01/89	NU
CO	D052546	Joe's Mine	09/27/48	160	UP	Sheridan Enterprises, Inc.	100	1	08/01/77	ind	08/01/87	NU
CO	C23396	Johnnie's Mine	01/01/79	80	UN	Lombardi, P.	100	1	01/01/79	den	01/01/89	OO
CO	C067	Long Canyon	07/01/52	962	UN	North Central Energy Co.	100	1	10/01/84	ind	10/01/94	OM
CO	P058043	Martinez	09/11/41	40	UP	Martinez, A.	100	1	09/11/41	den	08/04/86	NU
CO	C0105299	North Park	06/01/68	560	UN	Gulf Oil Corp.	50	2	06/01/68	den	08/04/86	NM
CO	C0105300	North Park	06/01/68	1680	UN	Gulf Oil Corp.	50	2	06/01/68	den	08/04/86	NM
CO	C0123177	North Park	08/01/66	1707	UN	Gulf Oil Corp.	50	2	06/01/68	den	08/04/86	NM
CO	D036955	Paonia Farmers	12/28/23	280	UP	Colorado Westmoreland, Inc.	100	1	11/01/82	ind	11/01/92	NU
CO	C29220	Pinnacle	08/01/81	274	UN	Colorado Yampa Coal Co.	100	1	08/01/81	den	08/01/91	OO
CO	D051376	Routt Co.	10/08/40	250	UN	AMCA Coal Leasing, Inc.	100	1	06/01/78	ind	06/01/88	NM
CO	C068389	S. Somerset	09/01/61	560	UN	U.S. Steel Corp.	100	1	09/01/61	den	08/04/86	NM
CO	C051669	S. Somerset	09/01/61	1092	UN	Grand Mesa Properties Co.	100	1	07/01/82	ind	07/01/92	NM
CO	D052558	S. Somerset	08/19/44	214	UP	U.S. Steel Corp.	100	1	04/01/56	ind	08/04/86	NM
CO	D051698	Sun	09/11/41	146	UP	Ruby Construction Co.	100	1	11/01/74	ind	08/04/86	NM
CO	C0120078	Tongue Mesa	01/11/68	2000	UN	Gulf Oil Corp.	100	1	11/01/68	den	08/04/86	NM
CO	C0120079	Tongue Mesa	01/11/68	2560	UN	Gulf Oil Corp.	100	1	11/01/68	den	08/04/86	NM
CO	C0120080	Tongue Mesa	01/11/68	1600	UN	Gulf Oil Corp.	100	1	11/01/68	den	08/04/86	NM
CO	D038385	Tongue Mesa	03/01/29	360	UP	Gulf Oil Corp.	100	1	11/01/68	den	08/04/86	NM
CO	C0120073	Tongue Mesa	01/11/68	2240	UN	Gulf Oil Corp.	100	1	05/01/66	ind	08/04/86	NM
CO	C0120077	Tongue Mesa	01/11/68	1242	UN	Gulf Oil Corp.	100	1	11/01/68	den	08/04/86	NM
CO	C0120076	Tongue Mesa	01/12/68	2320	UN	Gulf Oil Corp.	100	1	11/01/68	den	08/04/86	NM

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CO	D052501	Windjammer	08/20/45	280	UP	Anchor Coal Co.	100	1	12/01/78	ind	12/01/88	NM
KY	ES15444	Greenwood	09/01/81	409	OO	Greenwood Land Mining Co.	100	1	09/01/81	den	09/01/91	OO
KY	ES12847	Leeco	03/01/75	362	OO	LEECO	100	1	03/01/75	den	08/04/86	OO
KY	ES30967	River Processing	12/01/84	197	OO	River Processing, Inc.	100	1	12/01/84	den	12/01/94	OO
KY	ES12304	Ryan's Creek	01/01/79	319	OO	Ryans Creek Coal Co.	100	1	01/01/79	den	01/01/89	OO
KY	ES21181	Ryan's Creek	05/01/82	1921	OO	Ryans Creek Coal Co.	100	1	05/01/82	den	05/01/92	OO
KY	ES3615	Smith-Peavley	01/01/74	1282	OO	Smith & Peavley Co.	100	1	01/01/74	den	08/04/86	OO
MT	M15965	Big Sky	04/01/71	4307	AA	Peabody Coal Co.	100	1	04/01/71	den	08/04/86	YM
MT	B020989	Colstrip	05/05/23	1446	AA	Western Energy Co.	100	1	08/01/59	ind	08/04/86	YM
MT	M073109	Colstrip	09/01/66	5792	AA	Western Energy Co.	100	1	10/01/66	den	08/04/86	YM
MT	M35734	Colstrip	08/01/79	480	AA	Western Energy Co.	100	1	08/01/79	den	08/01/89	OO
MT	M35735	Colstrip	08/01/79	447	AA	Western Energy Co.	100	1	08/01/79	den	08/01/89	OO
MT	M42381	Colstrip	06/01/80	62	AA	Western Energy Co.	100	1	06/01/80	den	06/01/90	OO
MT	M54712	Colstrip	08/01/82	893	AA	Western Energy Co.	100	1	08/01/82	den	08/01/92	OO
MT	M54711	Colstrip	08/01/82	1633	AA	Western Energy Co.	100	1	08/01/82	den	08/01/92	OO
MT	M54713	Colstrip	08/01/82	2250	AA	Western Energy Co.	100	1	08/01/82	den	08/01/92	OO
MT	M052647	Divide	07/01/28	80	AA	Divide Coal Mining Co.	100	1	11/01/62	den	08/04/86	YM
MT	M073093	E. Decker	08/01/66	9410	AA	Decker Coal Co.	100	1	09/01/71	ind	08/04/86	YM
MT	M023207	Savage	03/01/57	960	AA	Knife River Coal Co.	100	1	03/01/57	den	08/04/86	YM
MT	M069782	Spring Creek	07/01/65	2347	AA	Spring Creek Coal Co.	100	1	01/01/66	ind	08/04/86	YM
MT	M06770	W. Decker	01/01/54	40	AA	Kukuchka, C. & W.	100	2	11/20/78	ind	11/20/88	YM
MT	M057934A	W. Decker	01/01/63	1841	AA	Decker Coal Co.	100	1	10/01/71	ind	08/04/86	YM
MT	M061685	W. Decker	03/01/64	2360	AA	Decker Coal Co.	100	1	10/13/71	ind	08/04/86	YM
MT	M057934	W. Decker	10/01/63	720	AA	Decker Coal Co.	100	1	05/01/75	ind	08/04/86	YM
MT	M37604	W. Decker	07/01/81	440	AA	Decker Coal Co.	100	1	07/01/81	den	07/01/91	OO
MT	M54716	W. Decker	09/01/82	40	AA	Montana Royalty Co.	100	1	09/01/82	den	09/01/92	OO
MT	M46292	CX Ranch	03/01/64	674	PN	Consolidation Coal Co.	50	2	05/01/80	seg	05/01/90	NM
MT	M061686	Wolf Mountain	03/01/64	524	PN	Peter Kiewit Sons, Inc.	100	1	03/01/64	den	08/04/86	NM
MT	GF082523	Bugni	08/06/42	80	UP	Bugni, A.	50	2	10/01/65	ind	08/04/86	NU
MT	M54714	Cook Mountain	06/01/83	2096	UN	Thermal Energy Co.	100	1	06/01/83	den	06/01/93	OO
MT	B028531	Johnson	03/03/28	80	UP	Johnson, G. & A.	100	2	12/01/60	ind	08/04/86	NU
MT	M069945	Pearl	11/01/62	541	UN	Shell Oil Corp.	100	1	08/15/75	ind	08/04/86	NU
MT	M3831	U.S. Steel	12/01/67	2537	UN	U.S. Steel Corp.	100	1	10/01/67	den	08/04/86	NU
MT	M3832	U.S. Steel	12/01/67	2559	UN	U.S. Steel Corp.	100	1	10/01/67	den	08/04/86	NU
ND	M043848	Center	01/01/62	2325	AA	Baukol-Noonan, Inc.	100	1	10/01/70	ind	08/04/86	YM
ND	M31053	Falkirk	08/01/80	160	AA	Falkirk Mining Co.	100	1	08/01/80	den	08/01/90	OO
ND	M071813	Freedom	11/01/67	2034	AA	Coteau Properties, Inc.	100	1	11/01/75	ind	08/04/86	QC
ND	M042819	Freedom	10/01/61	764	AA	Coteau Properties, Inc.	100	1	10/01/61	den	08/04/86	QC
ND	M163	Freedom	03/01/67	400	AA	Coteau Properties, Inc.	100	1	03/01/67	den	08/04/86	QC
ND	BLM019127	Gascoyne	01/01/51	2872	AA	Knife River Coal Co.	100	1	01/01/51	den	08/04/86	YM
ND	M070203	Glenharold	11/01/65	477	AA	Basin Cooperative Services	100	1	03/01/84	ind	03/01/94	YM

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ND	M11269	Glenharold	05/01/71	260	AA	Basin Cooperative Services	100	1	03/01/84	ind	03/01/94	YM
ND	M21209	Glenharold	11/01/79	1688	AA	Basin Cooperative Services	100	1	03/01/84	ind	03/01/94	OO
ND	BK020273	Indian Head	10/02/22	1357	AM	North American Coal Corp.	100	1	07/01/57	ind	08/04/86	YD
ND	M34980	Indian Head	04/01/79	441	AA	North American Coal Corp.	100	1	04/01/79	den	04/01/89	OO
ND	M59727	Indian Head ?	06/01/84	380	AA	North American Coal Corp.	100	1	06/01/84	den	06/01/94	OO
ND	M065329	Nelson Pit	12/01/64	320	AA	Geo Resources Exploration, Inc	100	1	12/01/64	den	08/04/86	QC
ND	M041765	South Beulah	08/01/61	1600	AA	Knife River Coal Co.	100	1	08/01/61	den	08/04/86	YM
ND	M43083	South Beulah	08/19/80	80	AA	Knife River Coal Co.	100	1	08/19/80	den	08/19/90	OO
ND	M15896	Velva	05/01/71	40	AM	Consolidation Coal Co.	100	1	05/01/71	den	08/04/86	YD
ND	BLM018322	Bonsness	01/01/51	80	R	Bonsness, L.	100	1	11/17/75	rel	/ /	OO
ND	M061025	American Colloid	03/01/64	80	UN	American Colloid Co.	100	1	03/01/64	den	08/04/86	NU
ND	M437	New Leipzig	03/01/69	640	UN	Knife River Coal Co.	100	1	03/01/69	den	08/04/86	NO
ND	M438	New Leipzig	03/01/69	2872	UN	Knife River Coal Co.	100	1	03/01/69	den	08/04/86	NO
ND	M37829	Renner's Cove	03/01/67	322	UN	Consolidation Coal Co.	100	1	09/01/77	seg	09/01/87	NO
NM	NM0186612	De Na Zin	08/01/61	2188	AA	Paragon Resources Co.	50	2	11/01/80	ind	11/01/90	YL
NM	NM0186615	De Na Zin	08/01/61	2027	AA	Paragon Resources Co.	50	2	11/01/80	ind	11/01/90	YL
NM	NM45183	De-Na-Zin exch	09/27/84	928	AA	Paragon Resources Co.	100	1	09/27/84	den	09/27/94	OO
NM	NM0510466	La Ventana	07/01/67	2002	AN	IBI Coal Co.	100	1	11/01/77	ind	11/01/87	NM
NM	NM0510467	La Ventana	07/01/67	2433	AN	IBI Coal Co.	100	1	11/01/77	ind	11/01/87	NM
NM	NM0510468	La Ventana	07/01/67	2505	AN	IBI Coal Co.	100	1	11/01/77	ind	11/01/87	NM
NM	NM0555316	La Ventana	02/01/69	160	AN	IBI Coal Co.	100	1	11/01/77	ind	11/01/87	NM
NM	NM0555317	La Ventana	12/01/64	2206	AN	IBI Coal Co.	100	1	11/01/77	ind	11/01/87	NM
NM	NM057349	McKinley	04/01/61	2513	AA	Gulf Oil Corp.	100	1	04/01/61	den	08/04/86	YM
NM	NM057348	McKinley	04/01/61	2485	AA	Gulf Oil Corp.	100	1	04/01/61	den	08/04/86	YM
NM	NM0554844	McKinley	11/01/64	540	AA	Gulf Oil Corp.	100	1	04/01/61	den	08/04/86	YM
NM	NM065466	McKinley	01/01/64	2560	AA	Gulf Oil Corp.	100	1	04/01/61	den	08/04/86	YM
NM	SF071448	San Juan	06/11/40	40	AA	Bank of America	100	1	10/01/82	ind	10/01/92	YM
NM	NM045197	San Juan	11/01/61	2565	AA	Bank of America	100	1	10/01/82	ind	10/01/92	YM
NM	NM045217	San Juan	11/01/61	1800	AA	Bank of America	100	1	10/01/82	ind	10/01/92	YM
NM	NM045196	San Juan	11/01/61	2467	AA	Bank of America	100	1	10/01/82	ind	10/01/92	YM
NM	NM28093	San Juan	04/01/80	3856	AA	Paragon Resources Co.	50	1	11/01/80	par	11/01/90	OO
NM	NM0315559	La Plata	08/01/63	2044	PS	San Juan Coal Co.	100	1	07/01/82	ind	07/01/92	YL
NM	NM0186613	Bisti Exchange	08/01/61	1240	RE	Paragon Resources Co.	50	2	11/01/80	ind	/ /	OO
NM	SF048323	Ametex	07/19/29	120	UN	Ametex Corp.	100	1	02/01/78	ind	02/01/88	NU
NM	NM732	Ametex	02/01/67	160	UN	Ametex Corp.	100	1	02/01/78	ind	02/01/88	NM
NM	NM10931	Black Lake	11/01/70	1910	UN	Eastern Coal Properties, Inc.	50	2	05/01/72	ind	08/04/86	NM
NM	NM52786	Carbon	06/01/83	160	UN	Carbon Coal	100	1	06/01/83	den	06/01/93	OO
NM	SF074673	Davis	01/10/41	40	UN	Davis, R.	100	1	07/27/53	ind	08/04/86	NU
NM	SF077115	Ingraham	02/27/44	160	UN	Ingraham, F.	100	1	08/01/77	ind	08/01/87	NU
NM	SF075321	Padilla	12/11/39	120	UN	Padilla, F.	100	1	10/01/55	ind	08/04/86	NM
NM	SF077779	Padilla	05/01/49	40	UN	Padilla, F.	100	1	05/01/49	den	08/04/86	NM

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NM	SF076644	Simmons	05/10/44	80	UN	Simmons, J.	100	1	02/01/58	ind	08/04/86	NU
NM	NM2457	Star Lake	09/01/67	6336	UN	Peabody Coal Co.	50	2	12/01/74	ind	08/04/86	NM
NM	SF066817	Texas Ind.	01/25/35	120	UN	Santa Fe Mining Co.	100	1	07/01/82	ind	07/01/92	NM
NM	SF042800	Urtado	04/08/24	41	UN	Santa Fe Mining Co.	100	1	07/01/82	ind	07/01/92	NM
OK	BLMC035068	Bokoshe	10/01/53	3470	AI	CF&I Steel Corp.	100	1	03/01/78	ind	03/01/88	YM
OK	NM24005	McCurtain No. 2	12/01/79	140	AM	Great National Corp.	100	1	12/01/79	den	12/01/89	YD
OK	BLMC018820	Milton	03/21/49	915	AM	Lone Star Steel Co.	100	1	07/01/56	ind	08/04/86	YD
OK	NM059992	Milton	06/01/59	1680	AM	Lone Star Steel Co.	100	1	06/01/59	den	08/04/86	YD
OK	BLMC021851	Starlight	08/01/51	1500	AM	Lone Star Steel Co.	100	1	08/01/51	den	08/04/86	YD
OK	BLMC030953	Stigler	09/01/58	961	AM	Garland Coal & Mining Co.	100	1	08/10/83	den	08/10/93	YD
OK	NM3174	Block 25	05/01/68	2840	PS	P.I.I. West Ltd.	100	1	02/01/83	par	02/01/93	YL
OK	BLMC031135	Gail (Block 17)	05/01/56	1180	PS	K&R Coal Co.	100	1	11/18/81	ind	11/19/91	YL
OK	NM0557450	Ozark (Block 15)	09/01/65	880	PS	Howe Coal Co.	100	1	07/01/83	ind	07/01/93	YL
OK	BLMC028370	Block 13	05/01/56	240	R	Garland Coal & Mining Co.	100	1	03/21/80	rel	/ /	OO
OK	BLMC027239	Block 16	08/04/53	880	R	Hall, H.	100	1	07/01/83	rel	/ /	OO
OK	BLMC031985	Block 1	12/01/57	1844	UP	Farrell Cooper Mining Co.	100	1	05/01/84	ind	05/01/94	QM
OK	BLMC032614	Block 1	02/01/58	1000	UN	Farrell Cooper Mining Co.	100	1	05/01/84	ind	05/01/94	QM
OK	NM033722	Block 1	02/01/62	2552	UN	Farrell Cooper Mining Co.	100	1	05/01/84	ind	05/01/94	QM
OK	NM033723	Block 1	03/01/62	2520	UN	Farrell Cooper Mining Co.	100	1	05/01/84	ind	05/01/94	QM
OK	NM036953	Block 1	05/01/63	1160	UN	Farrell Cooper Mining Co.	100	1	05/01/84	ind	05/01/94	QM
OK	NM0536361	Block 10	06/01/64	561	UN	Freeman-United Mining Co.	100	1	06/01/64	den	08/04/86	NU
OK	BLMC022999	Block 12	10/01/69	1385	UP	Garland Coal & Mining Co.	100	1	02/01/68	ind	08/04/86	NM
OK	BLMI018074	Block 15	09/01/61	326	UP	Howe Coal Co.	100	1	07/01/83	ind	07/01/93	QM
OK	NM025632	Block 15	09/01/61	2266	UN	Howe Coal Co.	100	1	07/01/83	ind	07/01/93	QM
OK	NM033866	Block 15	03/01/62	2048	UP	Howe Coal Co.	100	1	07/01/83	ind	07/01/93	QM
OK	NM034521	Block 15	03/01/62	2544	UN	Howe Coal Co.	100	1	07/01/83	ind	07/01/93	QM
OK	NM0556624	Block 15	11/01/70	4375	UN	Howe Coal Co.	100	1	07/01/83	ind	07/01/93	QM
OK	NM0161332	Block 18	12/01/61	2557	UP	Gaither, K.	100	1	06/01/72	ind	08/04/86	NU
OK	BLMI017683	Block 2	02/09/68	2560	UP	Cameron Coal Co.	100	1	05/01/62	den	08/04/86	NM
OK	NM029891	Block 2	05/01/62	960	UP	Cameron Coal Co.	100	1	11/24/50	den	08/04/86	NM
OK	NM029892	Block 2	05/01/62	944	UP	Cameron Coal Co.	100	1	05/01/62	den	08/04/86	NM
OK	BLMI018108	Block 2	09/25/69	960	UP	The Pacola Co.	100	1	06/28/50	den	08/04/86	NM
OK	NM050405	Block 21	12/01/59	1116	UP	Lone Star Steel Co.	100	1	12/01/59	den	08/04/86	NU
OK	BLMC018125	Block 22	09/01/50	2560	UN	Lone Star Steel Co.	100	1	09/01/50	den	08/04/86	NM
OK	NM050406	Block 22	12/01/59	2400	UN	Lone Star Steel Co.	100	1	12/01/59	den	08/04/86	NM
OK	NM059996	Block 23	04/01/60	719	UN	Lone Star Steel Co.	100	1	06/01/75	ind	08/04/86	NU
OK	NM957	Block 26	09/01/67	3342	UN	P.I.I. West Ltd.	100	1	02/01/83	par	02/01/93	NU
OK	NM0141015	Block 3	07/01/62	360	UN	Cari International Mining Corp	100	1	05/01/76	ind	08/04/86	NM
OK	BLMC022012	Block 4	08/10/53	794	UN	Evans Coal Co.	100	1	08/01/53	den	08/04/86	NM
OK	BLMC028799	Block 4	05/01/56	640	UN	Evans Coal Co.	100	1	05/01/56	den	08/04/86	NM
OK	BLMC032224	Block 4	03/01/54	400	UP	Evans Coal Co.	100	1	03/01/54	den	08/04/86	NM

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OK	BLMI017564	Block 4	09/07/68	1347	UP	Evans Coal Co.	100	1	10/01/50	ind	08/04/86	NM
OK	NM023555	Block 4 & 5	02/01/61	2560	UN	Evans Coal Co.	100	1	03/01/76	ind	08/04/86	NM
OK	NM023556	Block 5	02/01/61	1687	UN	Evans Coal Co.	100	1	03/01/76	ind	08/04/86	NM
OK	BLMC028369	Block 6	07/01/52	1000	UP	Evans Coal Co.	100	1	04/01/78	ind	04/01/88	NU
OK	BLMI017612	Block 7	03/08/70	1869	UP	Evans Coal Co.	100	1	03/01/50	den	08/04/86	NM
OK	BLMC029794	Block 8	04/01/56	2479	UN	Evans Coal Co.	100	1	03/01/68	ind	08/04/86	NU
OK	BLMC030584	Block 9	09/01/56	2551	UN	Evans Coal Co.	100	1	03/01/68	ind	08/04/86	NU
OK	BLMC031611	Block 9	10/01/56	2530	UN	Evans Coal Co.	100	1	03/01/68	ind	08/04/86	NU
OK	NM50270	Bokoshe NP	05/01/82	80	UN	Bokoshe Coal Company	100	1	05/01/82	den	05/01/92	OO
OK	NM50936	Farrell Cooper NP	02/01/83	1170	UN	Farrell Cooper Mining Co.	100	1	02/01/83	den	02/01/93	OO
OK	NM3099	Gaither NP	02/01/82	5707	UN	Gaither, Kenneth R.	100	1	02/01/82	den	02/01/92	OO
OK	NM50410	HFCO NP	09/01/83	98	UN	HFCO, Inc.	100	1	09/01/83	den	09/01/93	OO
OK	NM44130	Lone Star NP	04/01/82	200	UN	Lone Star Steel Co.	100	1	04/01/82	den	04/01/92	OO
OK	BLMI017902	Rees-Milton	09/25/69	680	UP	Mining Systems Corp.	100	1	12/01/76	ind	12/01/86	NU
OR	OR012472	Eden Ridge	06/01/62	2354	UN	Eden Ridge Coal Co.	100	1	06/01/62	den	08/04/86	NM
OR	OR03520	Eden Ridge	01/19/59	2520	UN	Eden Ridge Coal Co.	100	1	01/19/59	den	08/04/86	NM
OR	OR05272	Mandrones	06/01/57	538	UP	CPS Mining Co, Inc.	100	1	/ /	ind	08/04/86	NU
PA	ES9403	Helen Mining	07/01/74	30	AA	Helen Mining Co.	100	1	07/01/74	den	08/04/86	YM
PA	ES13845	Helen Mining	07/01/74	51	AA	Helen Mining Co.	100	1	07/01/74	den	08/04/86	YM
UT	SL063011	C&W No. 1	11/28/41	280	AN	Wasatch Coal Co.	100	1	07/01/76	ind	08/04/86	QM
UT	SL027304	Centennial Project	09/01/25	120	AA	AMCA Coal Leasing, Inc.	100	1	11/01/76	par	11/01/86	YM
UT	SL063058	Centennial Project	08/03/42	240	AA	AMCA Coal Leasing, Inc.	100	1	11/01/76	par	11/01/86	YM
UT	U010581	Centennial Project	02/01/56	1682	AA	AMCA Coal Leasing, Inc.	100	1	11/01/76	par	11/01/86	YM
UT	U52341	Centennial Project	12/01/83	120	AA	AMCA Coal Leasing, Inc.	100	1	12/01/83	den	12/01/93	OO
UT	U1358	Deer Creek-Wilberg	08/01/67	320	AA	Utah Power & Light Co.	100	1	09/01/77	ind	09/01/87	YM
UT	SL064607	Deer Creek-Wilberg	10/04/46	614	AA	Utah Power & Light Co.	100	1	09/01/77	ind	09/01/87	YM
UT	SL064900	Deer Creek-Wilberg	02/03/45	160	AA	Utah Power & Light Co.	100	1	09/01/77	ind	09/01/87	YM
UT	U040151	Deer Creek-Wilberg	01/03/62	1720	AA	Corp. of the Presiding Bishop	100	1	03/01/62	den	08/04/86	YM
UT	U083066	Deer Creek-Wilberg	03/01/61	1285	AA	Corp. of the Presiding Bishop	100	1	03/01/62	den	08/04/86	YM
UT	U044025	Deer Creek-Wilberg	01/08/60	40	AA	Corp. of the Presiding Bishop	100	1	08/01/60	den	08/04/86	YM
UT	U084923	Deer Creek-Wilberg	08/01/64	2252	AA	McKinnon Trusts	100	1	08/01/64	den	08/04/86	YM
UT	U084924	Deer Creek-Wilberg	08/01/64	1211	AA	McKinnon Trusts	100	1	08/01/64	den	08/04/86	YM
UT	SL070645	Deer Creek-Wilberg	04/01/52	2560	AA	McKinnon Trusts	100	1	04/01/52	den	08/04/86	YM
UT	U02664	Des-Bee-Dove	01/01/57	920	AA	Utah Power & Light Co.	100	1	07/01/72	ind	08/04/86	YM
UT	SL050133	Des-Bee-Dove	08/01/33	80	AA	Utah Power & Light Co.	100	1	07/01/76	ind	08/04/86	YM
UT	SL066116	Des-Bee-Dove	06/01/55	400	AA	Utah Power & Light Co.	100	1	09/01/77	ind	09/01/87	YM
UT	U5287	Emery Deep	07/01/70	720	AA	Consolidation Coal Co.	50	2	07/01/70	den	08/04/86	QC
UT	U073040	Emery Field (#8)	06/01/62	2542	AA	Consolidation Coal Co.	50	2	10/01/66	par	08/04/86	QC
UT	U073041	Emery Field (#8)	06/01/62	2558	AA	Consolidation Coal Co.	50	2	06/01/62	den	08/04/86	QC
UT	U0101213	Emery Field (#8)	06/01/65	2162	AA	Consolidation Coal Co.	50	2	06/01/65	den	08/04/86	QC
UT	U0101214	Emery Field (#8)	06/01/65	2314	AA	Consolidation Coal Co.	50	2	06/01/65	den	08/04/86	QC

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UT	U0101215	Emery Field (#8)	06/01/65	856	AA	Consolidation Coal Co.	50	2	06/01/65	den	08/04/86	QC
UT	U0101217	Emery Field (#8)	06/01/65	640	AA	Consolidation Coal Co.	50	2	06/01/65	den	08/04/86	QC
UT	U0101218	Emery Field (#8)	06/01/65	1880	AA	Consolidation Coal Co.	50	2	06/01/65	den	08/04/86	QC
UT	U090231	Emery Field (#8)	11/01/62	2497	AA	Consolidation Coal Co.	50	2	10/01/66	par	08/04/86	QC
UT	U073039	Emery Field (#8)	06/01/62	2577	AA	Consolidation Coal Co.	50	2	10/01/66	par	08/04/86	QC
UT	SL046612	Geneva	04/02/29	280	AI	U.S. Steel Corp.	100	1	03/28/31	den	08/04/86	YM
UT	SL066145	Geneva	06/19/46	1552	AI	U.S. Steel Corp.	100	1	06/19/46	den	08/04/86	YM
UT	U47975	Gordon Ck/Belina	12/01/81	3628	AA	Kanawha Hocking Coal & Coke	100	1	12/01/81	den	12/01/91	OO
UT	U8319	Gordon Creek #2	03/01/70	962	AA	Beaver Creek Coal Co.	100	1	05/01/76	ind	08/04/86	YM
UT	SL025431	Hiawatha	02/08/23	2370	AA	United States Fuel Co.	100	1	02/08/23	den	08/04/86	YM
UT	SL069985	Hiawatha	11/01/49	2356	AA	United States Fuel Co.	100	1	11/01/49	den	08/04/86	YM
UT	U026583	Hiawatha	02/01/61	1000	AA	United States Fuel Co.	100	1	02/01/61	den	08/04/86	YM
UT	SL064903	Huntington Canyon	01/24/46	160	AI	Beaver Creek Coal Co.	100	1	06/01/76	ind	08/04/86	YM
UT	U33454	Huntington Canyon	12/01/78	440	AI	Beaver Creek Coal Co.	100	1	12/01/78	den	12/01/88	OO
UT	SL050641	Huntington Canyon	12/06/38	160	AI	Intermountain Exloration Co.	100	1	06/01/73	ind	08/04/86	YM
UT	U53159	Pinnacle ?	12/01/81	656	AA	Beaver Creek Coal Co.	100	1	12/01/81	den	12/01/91	OO
UT	U058184	Price River Complex	06/17/21	694	AI	Blackhawk Coal Co.	100	1	02/01/76	ind	08/04/86	YM
UT	SL071737	Price River Complex	09/01/50	1960	AI	Blackhawk Coal Co.	100	1	06/01/76	ind	08/04/86	YM
UT	U25484	Price River Complex	06/17/21	634	AI	Blackhawk Coal Co.	100	1	02/01/76	ind	08/04/86	YM
UT	U019524	Price River Complex	06/01/57	645	AI	Blackhawk Coal Co.	100	1	02/01/76	ind	08/04/86	YM
UT	U0148779	Price River Complex	08/01/66	1240	AI	Blackhawk Coal Co.	100	1	09/01/74	ind	08/04/86	YM
UT	U0146345	Price River Complex	11/01/65	1160	AI	Blackhawk Coal Co.	100	1	09/01/74	ind	08/04/86	YM
UT	SL046652	Price River Complex	08/03/21	802	AI	Blackhawk Coal Co.	100	1	09/01/74	ind	08/04/86	YM
UT	SL048442	Price River Complex	11/21/30	2563	AI	Blackhawk Coal Co.	100	1	09/01/74	ind	08/04/86	YM
UT	SL029093	Price River Complex	06/17/21	1284	AI	Blackhawk Coal Co.	100	1	06/01/76	ind	08/04/86	YM
UT	U25683	Price River Complex	12/01/79	1173	AI	Blackhawk Coal Co.	100	1	07/01/80	ind	07/01/90	OO
UT	U25485	Price River Complex	09/01/50	543	AI	Blackhawk Coal Co.	100	1	02/01/76	ind	08/04/86	YM
UT	SL062583	SUFCO	09/11/41	2200	AA	Coastal States Energy Co.	100	1	05/25/45	ind	08/04/86	YM
UT	U062453	SUFCO	03/01/62	480	AA	Coastal States Energy Co.	66	2	03/01/79	par	03/01/89	YM
UT	U0149084	SUFCO	06/01/66	240	AA	Coastal States Energy Co.	100	1	06/01/66	den	08/04/86	YM
UT	U28297	SUFCO	01/01/79	2632	AA	Coastal States Energy Co.	100	1	01/01/79	den	01/01/89	OO
UT	U07746	Sage Point	06/03/57	2480	AN	Sunoco Energy Development Co.	50	2	06/01/82	par	06/01/92	QM
UT	U089096	Sage Point	07/01/62	480	AN	Sunoco Energy Development Co.	100	1	06/01/82	ind	06/01/92	QM
UT	U092147	Sage Point	12/01/62	680	AN	Sunoco Energy Development Co.	100	1	06/01/82	ind	06/01/92	QM
UT	U0144820	Sage Point	09/01/66	2212	AN	Sunoco Energy Development Co.	100	1	06/01/82	ind	06/01/92	QM
UT	U07064	Sage Point	01/01/57	2416	AN	Sunoco Energy Development Co.	100	1	06/01/82	ind	06/01/92	QM
UT	U073120	Skyline	02/01/64	557	AA	Kanawha & Hocking Coal & Coke	100	1	09/01/73	ind	08/04/86	YM
UT	U0142235	Skyline	10/01/64	520	AA	Coastal States Energy Co.	100	1	03/01/83	ind	03/01/93	YM
UT	U0147570	Skyline	05/01/66	2093	AA	Coastal States Energy Co.	100	1	03/01/83	ind	03/01/93	YM
UT	SL051279	Soldier Canyon	01/04/35	1548	AA	California Portland Cement Co.	100	1	12/01/62	ind	08/04/86	YM
UT	U50722	Soldier Canyon	09/01/82	400	AA	Soldier Creek Coal Co.	100	1	09/01/82	den	09/01/92	OO

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UT	U7949	Star Point 1&2	09/04/70	1631	AA	Getty Mining Co.	100	1	09/01/70	den	08/04/86	YM
UT	SL031286	Star Point 1&2	09/01/70	240	AA	Getty Mining Co.	100	1	11/01/71	ind	08/04/86	YM
UT	U37045	Star Point 1&2	04/01/80	698	AA	Getty Mining Co.	100	1	04/01/80	den	04/01/90	OO
UT	U13097	Star Point 1&2	05/01/74	1360	AA	Getty Mining Co.	100	1	05/01/74	den	08/04/86	YM
UT	SL062966	Sunnyside1,2&3	11/12/43	1367	AA	Kaiser Steel Corp.	100	1	01/21/41	den	08/04/86	YM
UT	U32083	Sunnyside1,2&3	03/01/79	476	AA	Kaiser Steel Corp.	100	1	03/01/79	den	03/01/89	OO
UT	U082996	Trail Mt.	07/01/62	80	AI	Bell, J.	100	1	04/01/75	ind	08/04/86	YM
UT	U067498	Valley Camp (O'Connor)	01/01/62	502	AA	Kanawha & Hocking Coal & Coke	100	1	09/01/73	ind	08/04/86	YM
UT	U017354	Valley Camp Complex	09/01/56	1028	AA	Kanawha & Hocking Coal & Coke	100	1	09/01/73	ind	08/04/86	YM
UT	U044076	Valley Camp Complex	09/01/65	2368	AA	Coastal States Energy Co.	100	1	03/01/83	ind	03/01/93	YM
UT	U020305	Valley Camp Complex	09/01/56	1439	AA	Coastal States Energy Co.	100	1	03/01/83	ind	03/01/93	YM
UT	U47974	Valley Camp Complex	12/01/81	1999	AA	Kanawha & Hocking Coal & Coke	100	1	12/01/81	den	12/01/91	OO
UT	U47978	Wilberg (Cottonwood NP)	10/01/81	3347	AA	Utah Power & Light	100	1	10/01/81	den	10/01/91	OO
UT	U47979	Wilberg (Meetinghouse NP)	10/01/81	1063	AA	Utah Power & Light	100	1	10/01/81	den	10/01/91	OO
UT	U0105404	Alton East	06/01/65	1529	PN	Utah International, Inc.	100	1	06/01/66	ind	08/04/86	NM
UT	U0122579	Alton East	05/01/68	1120	PN	Utah International, Inc.	100	1	05/01/68	den	08/04/86	NM
UT	U0122584	Alton East	11/01/68	320	PN	Utah International, Inc.	100	1	11/01/68	den	08/04/86	NM
UT	U0122675	Alton East	11/01/68	80	PN	Utah International, Inc.	100	1	11/01/68	den	08/04/86	NM
UT	U0126916	Alton East	11/01/68	320	PN	Utah International, Inc.	100	1	11/01/68	den	08/04/86	NM
UT	U0140770	Alton East	01/01/65	519	PN	Utah International, Inc.	100	1	01/01/65	den	08/04/86	NM
UT	U0147999	Alton East	05/01/65	320	PN	Utah International, Inc.	100	1	10/18/71	den	08/04/86	NM
UT	U098774	Alton East	06/01/65	2488	PN	Utah International, Inc.	100	1	06/01/66	ind	08/04/86	NM
UT	U098775	Alton East	06/01/66	1599	PN	Utah International, Inc.	100	1	06/01/66	ind	08/04/86	NM
UT	SL058575	Alton West	10/11/36	156	PN	Nevada Electric Investment Co.	100	1	05/01/71	ind	08/04/86	NM
UT	U060745	Alton West	11/01/61	2493	PN	Nevada Electric Investment Co.	100	1	11/01/61	den	08/04/86	NM
UT	U060746	Alton West	11/01/61	2324	PN	Nevada Electric Investment Co.	100	1	11/01/61	den	08/04/86	NM
UT	U065012	Alton West	11/01/61	755	PN	Nevada Electric Investment Co.	100	1	11/01/61	den	08/04/86	NM
UT	U083072	Alton West	07/01/62	1040	PN	Nevada Electric Investment Co.	100	1	07/01/62	den	08/04/86	NM
UT	SL068754	B Canyon	06/01/51	2571	PN	Royal Land Co.	100	1	01/01/83	ind	01/01/93	GM
UT	U02785	C Canyon	07/01/52	2360	PN	Kaiser Steel Corp.	100	1	05/01/65	ind	08/04/86	NM
UT	U039706	C Canyon	07/01/60	2559	PN	Kaiser Steel Corp.	100	1	05/01/65	ind	08/04/86	NM
UT	U47977	Rilda Canyon	10/01/82	640	PN	W.A. Land Company	100	1	10/01/82	den	10/01/92	OO
UT	SL050862	Rilda Canyon (#13)	08/05/37	280	PN	W.A. Land Company	100	1	06/01/83	ind	06/01/93	NM
UT	U7653	Rilda Canyon (#6)	09/01/70	412	PN	Carroll County Coal Co.	100	1	09/01/70	den	08/04/86	NM
UT	SL050655	Emery (#10A)	11/17/38	80	R	Gent's Flying Enterprises	100	1	/ /	rel	/ /	OO
UT	U0103108	Kaiparowits	03/01/67	2560	RP	Peabody Coal Co.	100	1	07/01/67	ind	08/04/86	OO
UT	U0103131	Kaiparowits	04/01/67	2560	RP	Peabody Coal Co.	100	1	07/01/67	ind	08/04/86	OO
UT	U0103132	Kaiparowits	04/01/67	1272	RP	Peabody Coal Co.	100	1	07/01/67	ind	08/04/86	OO
UT	U0103133	Kaiparowits	04/01/67	1273	RP	Peabody Coal Co.	100	1	07/01/67	ind	08/04/86	OO
UT	U0115656	Kaiparowits	11/01/67	2560	RP	Peabody Coal Co.	100	1	09/01/67	den	08/04/86	OO
UT	U0115657	Kaiparowits	11/01/67	2560	RP	Peabody Coal Co.	100	1	09/01/67	den	08/04/86	OO

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UT	U096476	Kaiparowits	03/01/67	2552	RP	Peabody Coal Co.	100	1	07/01/67	ind	08/04/86	00
UT	U096477	Kaiparowits	03/01/67	1277	RP	Peabody Coal Co.	100	1	07/01/67	ind	08/04/86	00
UT	U098786	Kaiparowits	03/01/67	2550	RP	Peabody Coal Co.	100	1	07/01/67	ind	08/04/86	00
UT	U0101140	Kaiparowits	04/01/67	1600	RP	Peabody Coal Co.	100	1	07/01/67	ind	08/04/86	00
UT	U0101141	Kaiparowits	04/01/67	1760	RP	Peabody Coal Co.	100	1	07/01/67	ind	08/04/86	00
UT	U0113254	Kaiparowits	08/01/67	160	RP	Peabody Coal Co.	100	1	08/01/67	den	08/04/86	00
UT	SL062648	Tip Top (Crandall Canyon)	01/31/31	80	R	Gent's Flying Enterprises	100	1	/ /	rel	/ /	00
UT	U49332	?	03/01/83	642	UN	W.K. Minerals, Inc.	100	1	03/01/83	den	03/01/93	00
UT	U47080	?	10/01/81	1158	UN	Coastal States Energy Co.	100	1	10/01/81	den	10/01/91	00
UT	U0115938	Alton East	06/01/65	1721	UN	Utah International, Inc.	100	1	06/01/66	ind	08/04/86	NM
UT	U0122582	Alton East	11/01/68	582	UN	Utah International, Inc.	100	1	11/01/68	den	08/04/86	NM
UT	U0122583	Alton East	11/01/68	320	UN	Utah International, Inc.	100	1	11/01/68	den	08/04/86	NM
UT	U0122623	Alton East	04/01/66	280	UN	Utah International, Inc.	100	1	06/01/66	ind	08/04/86	NM
UT	U0122647	Alton East	11/01/68	600	UN	Utah International, Inc.	100	1	11/01/68	den	08/04/86	NM
UT	U0122649	Alton East	11/01/68	840	UN	Utah International, Inc.	100	1	11/01/68	den	08/04/86	NM
UT	U0122650	Alton East	11/01/68	1600	UN	Utah International, Inc.	100	1	11/01/68	den	08/04/86	NM
UT	U0122651	Alton East	11/01/68	1080	UN	Utah International, Inc.	100	1	11/01/68	den	08/04/86	NM
UT	U0122652	Alton East	11/01/68	80	UN	Utah International, Inc.	100	1	11/01/68	den	08/04/86	NM
UT	U0124768	Alton East	11/01/68	200	UN	Utah International, Inc.	100	1	11/01/68	den	08/04/86	NM
UT	U0149582	Alton East	09/01/66	560	UN	Utah International, Inc.	100	1	09/01/66	den	08/04/86	NM
UT	SL064507	Alton West	11/01/44	320	UN	Nevada Electric Investment Co.	100	1	04/01/63	ind	08/04/86	NM
UT	U0101153	Alton West	05/01/63	1000	UN	Nevada Electric Investment Co.	100	1	05/01/63	den	08/04/86	NM
UT	U098705	Alton West	05/01/63	2287	UN	Nevada Electric Investment Co.	100	1	05/01/63	den	08/04/86	NM
UT	SL063720	Carbon Emery Bank (#1)	12/17/42	200	UP	Brigham Young University	100	1	03/01/84	ind	03/01/94	NU
UT	U024814	Carbon Emery Bank (#1)	01/01/58	37	UN	Brigham Young University	100	1	03/01/84	ind	03/01/94	NU
UT	U08606	Carbon Emery Bank (#1)	10/01/53	40	UN	Brigham Young University	100	1	03/01/84	ind	03/01/94	NU
UT	U020641	Columbo	05/01/61	1909	UN	Beaver Creek Coal Co.	100	1	09/08/78	ind	09/08/88	NM
UT	U024316	Emery (#14B)	05/01/58	1400	UN	COP Coal Development Co.	100	1	09/01/80	ind	09/01/90	NM
UT	U46484	Emery (#14B2)	05/01/58	400	UN	Northwest Carbon Co.	100	1	05/01/58	den	08/04/86	NM
UT	SL051221	Emery (#15A)	08/01/33	80	UP	Utah Power & Light Co.	100	1	01/01/80	ind	01/01/90	NM
UT	U014275	Emery (#15A)	10/01/55	80	UP	Utah Power & Light Co.	100	1	01/01/80	ind	01/01/90	NM
UT	U024317	Emery (#15A)	05/01/58	400	UN	Utah Power & Light Co.	100	1	01/01/80	ind	01/01/90	NM
UT	U024319	Emery (#15A)	05/01/60	1040	UN	Utah Power & Light Co.	100	1	01/01/80	ind	01/01/90	NM
UT	U06039	Emery (#15A)	05/01/53	1360	UN	Utah Power & Light Co.	100	1	01/01/80	ind	01/01/90	NM
UT	U024318	Emery (#15B)	05/01/58	80	UN	COP Coal Development Co.	100	1	09/01/80	ind	09/01/90	NM
UT	U5146	Emery PRLA	04/01/83	2563	UN	Mountain States Resource Corp.	100	1	04/01/83	den	04/01/93	00
UT	U7958	Esclanate PRLA	12/01/81	3795	UN	Emery Energy, Inc.	100	1	12/01/81	den	12/01/91	00
UT	U05067	Eureka Energy (#2)	05/01/52	320	UP	Sunoco Energy Development Co.	100	1	06/01/82	ind	06/01/92	NM
UT	SL048223	Frandsen (#19A)	04/05/30	120	UP	Utah Power & Light Co.	100	1	07/01/82	ind	07/01/92	NU
UT	SL050638	Frandsen (#19B)	05/10/41	40	UP	Frandsen, G.	100	1	01/01/47	ind	08/04/86	NU
UT	U087805	Kaiparowits No. 1-5	11/01/65	2064	UN	Malapai Resources Co.	33	3	11/01/65	den	08/04/86	NM

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UT	U087806	Kaiparowits No. 1-5	11/01/65	1945	UN	Malapai Resources Co.	33	3	11/01/65	den	08/04/86	NM
UT	U087807	Kaiparowits No. 1-5	11/01/65	1920	UN	Malapai Resources Co.	33	3	11/01/65	den	08/04/86	NM
UT	U087828	Kaiparowits No. 1-5	11/01/65	2560	UN	Malapai Resources Co.	33	3	11/01/65	den	08/04/86	NM
UT	U087833	Kaiparowits No. 1-5	11/01/65	2518	UN	Malapai Resources Co.	33	3	11/01/65	den	08/04/86	NM
UT	U087834	Kaiparowits No. 1-5	11/01/65	2560	UN	Malapai Resources Co.	33	3	11/01/65	den	08/04/86	NM
UT	U087835	Kaiparowits No. 1-5	11/01/65	1920	UN	Malapai Resources Co.	33	3	11/01/65	den	08/04/86	NM
UT	U087836	Kaiparowits No. 1-5	11/01/65	640	UN	Malapai Resources Co.	33	3	11/01/65	den	08/04/86	NM
UT	U092138	Kaiparowits No. 1-5	11/01/65	1891	UN	Malapai Resources Co.	33	3	11/01/65	den	08/04/86	NM
UT	U092139	Kaiparowits No. 1-5	11/01/65	1935	UN	Malapai Resources Co.	33	3	11/01/65	den	08/04/86	NM
UT	U092140	Kaiparowits No. 1-5	11/01/65	2022	UN	Malapai Resources Co.	33	3	11/01/65	den	08/04/86	NM
UT	U092141	Kaiparowits No. 1-5	11/01/65	1972	UN	Malapai Resources Co.	33	3	11/01/65	den	08/04/86	NM
UT	U092142	Kaiparowits No. 1-5	11/01/65	1750	UN	Malapai Resources Co.	33	3	11/01/65	den	08/04/86	NM
UT	U096486	Kaiparowits No. 1-5	11/01/65	640	UN	Malapai Resources Co.	33	3	11/01/65	den	08/04/86	NM
UT	U096494	Kaiparowits No. 1-5	11/01/65	2560	UN	Malapai Resources Co.	33	3	11/01/65	den	08/04/86	NM
UT	U096495	Kaiparowits No. 1-5	11/01/65	2560	UN	Malapai Resources Co.	33	3	11/01/65	den	08/04/86	NM
UT	U096496	Kaiparowits No. 1-5	11/01/65	2560	UN	Malapai Resources Co.	33	3	11/01/65	den	08/04/86	NM
UT	U096497	Kaiparowits No. 1-5	11/01/65	2560	UN	Malapai Resources Co.	33	3	11/01/65	den	08/04/86	NM
UT	U096508	Kaiparowits No. 1-5	04/01/66	658	UN	Malapai Resources Co.	33	3	11/01/65	den	08/04/86	NM
UT	U096509	Kaiparowits No. 1-5	11/01/65	1479	UN	Malapai Resources Co.	33	3	11/01/65	den	08/04/86	NM
UT	U0101142	Kaiparowits No. 1-5	04/01/67	1562	UN	Malapai Resources Co.	33	3	11/01/65	den	08/04/86	NM
UT	U1362	Kaiparowits PRLA	02/01/82	18325	UN	Utah Power & Light	100	1	02/01/82	den	02/01/92	OO
UT	U0103107	Kaiparowits Plateau (#21)	09/01/67	2560	UN	Consolidation Coal Co.	100	1	03/01/68	ind	08/04/86	NM
UT	U0103109	Kaiparowits Plateau (#21)	09/01/67	2557	UN	Consolidation Coal Co.	100	1	03/01/68	ind	08/04/86	NM
UT	U0103129	Kaiparowits Plateau (#21)	09/01/67	2560	UN	Consolidation Coal Co.	100	1	03/01/68	ind	08/04/86	NM
UT	U0103130	Kaiparowits Plateau (#21)	09/01/67	2554	UN	Consolidation Coal Co.	100	1	03/01/68	ind	08/04/86	NM
UT	U0105418	Kaiparowits Plateau (#21)	09/01/67	2560	UN	Consolidation Coal Co.	100	1	03/01/68	ind	08/04/86	NM
UT	U0149373	Kaiparowits Plateau (#21)	01/01/69	2560	UN	Consolidation Coal Co.	100	1	03/01/68	ind	08/04/86	NM
UT	U098783	Kaiparowits Plateau (#21)	05/01/67	2541	UN	Consolidation Coal Co.	100	1	03/01/68	ind	08/04/86	NM
UT	U098784	Kaiparowits Plateau (#21)	05/01/67	2538	UN	Consolidation Coal Co.	100	1	03/01/68	ind	08/04/86	NM
UT	U098785	Kaiparowits Plateau (#21)	05/01/67	2543	UN	Consolidation Coal Co.	100	1	03/01/68	ind	08/04/86	NM
UT	U098787	Kaiparowits Plateau (#21)	05/01/67	2560	UN	Consolidation Coal Co.	100	1	03/01/68	ind	08/04/86	NM
UT	U083000	Kane Co. (#22)	12/01/64	1440	UN	Swanton Energy Resources Co.	100	1	08/01/83	ind	08/01/93	NU
UT	SL050619	King Cannel	06/01/38	240	UP	King Cannel Coal Co.	100	1	01/04/41	ind	08/04/86	NU
UT	U50044	Kingston	07/01/83	160	UN	Consolidation Coal Co.	100	1	07/01/83	den	07/01/93	OO
UT	U022918	Kingston (#7)	04/01/58	120	UN	Kingston, C. & J.	100	2	05/01/59	ind	08/04/86	NU
UT	U020668	Nev. Elec. (#14A)	05/01/58	627	UN	Beaver Creek Coal Co.	100	1	08/01/83	ind	08/01/93	NM
UT	U38727	Nev. Elec. (#14A)	05/01/58	740	UN	Beaver Creek Coal Co.	100	1	08/01/83	ind	08/01/93	NM
UT	SL066490	North Tract	12/31/47	2440	UP	Kaiser Steel Corp.	100	1	12/31/47	den	08/04/86	NM
UT	SL069291	North Tract	04/01/50	600	UN	Kaiser Steel Corp.	100	1	04/01/50	den	08/04/86	NM
UT	U0126947	North Tract	12/01/63	1992	UN	Kaiser Steel Corp.	100	1	12/01/63	den	08/04/86	NM
UT	U0126948	North Tract	12/01/63	2523	UN	Kaiser Steel Corp.	100	1	12/01/63	den	08/04/86	NM

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UT	U014217	North Tract	02/01/55	456	UN	Kaiser Steel Corp.	100	1	02/01/55	den	08/04/86	NM
UT	U014218	North Tract	02/01/55	320	UN	Kaiser Steel Corp.	100	1	02/01/55	den	08/04/86	NM
UT	SL049042	Rasmussen	08/14/37	40	UP	Rasmussen, A. & V.	100	2	12/02/53	ind	08/04/86	NU
UT	U0115791	Red & Blue	07/01/67	2560	UN	Swanton Energy Resources Co.	100	1	01/01/84	ind	01/01/94	NM
UT	U0115792	Red & Blue	10/01/67	1280	UN	Swanton Energy Resources Co.	100	1	01/01/84	ind	01/01/94	NM
UT	U0115793	Red & Blue	07/01/67	1280	UN	Swanton Energy Resources Co.	100	1	01/01/84	ind	01/01/94	NM
UT	U0115833	Red & Blue	10/01/67	640	UN	Swanton Energy Resources Co.	100	1	01/01/84	ind	01/01/94	NM
UT	U0130986	Red & Blue	10/01/67	2562	UN	Swanton Energy Resources Co.	100	1	01/01/84	ind	01/01/94	NM
UT	U0130988	Red & Blue	07/01/67	1907	UN	Swanton Energy Resources Co.	100	1	01/01/84	ind	01/01/94	NM
UT	U0130989	Red & Blue	10/01/67	2560	UN	Swanton Energy Resources Co.	100	1	01/01/84	ind	01/01/94	NM
UT	U0136512	Red & Blue	10/01/67	1279	UN	Swanton Energy Resources Co.	100	1	01/01/84	ind	01/01/94	NM
UT	U0140836	Red & Blue	10/01/67	2557	UN	Swanton Energy Resources Co.	100	1	01/01/84	ind	01/01/94	NM
UT	U0140837	Red & Blue	10/01/67	2553	UN	Swanton Energy Resources Co.	100	1	01/01/84	ind	01/01/94	NM
UT	U0148535	Red & Blue	10/01/67	1920	UN	Swanton Energy Resources Co.	100	1	01/01/84	ind	01/01/94	NM
UT	U0130985	Red & Blue	11/01/68	2560	UN	Swanton Energy Resources Co.	100	1	01/01/84	ind	01/01/94	NM
UT	U24427	Red & Blue	03/01/67	1280	UN	Swanton Energy Resources Co.	100	1	01/01/84	ind	01/01/94	NM
UT	U27835	Red & Blue	11/01/65	640	UN	Swanton Energy Resources Co.	100	1	01/01/84	ind	01/01/94	NM
UT	U083005	Red & Blue	08/01/64	640	UN	Swanton Energy Resources Co.	100	1	01/01/84	ind	01/01/94	NM
UT	U0141171	Rock Canyon	03/01/67	1825	UN	Energy Reserves Group, Inc.	100	1	03/01/79	ind	03/01/89	NM
UT	U0141176	Rock Canyon	03/01/67	1544	UN	Energy Reserves Group, Inc.	100	1	03/01/79	ind	03/01/89	NM
UT	U0141178	Rock Canyon	03/01/67	1976	UN	Energy Reserves Group, Inc.	100	1	03/01/79	ind	03/01/89	NM
UT	U053995	Sevier (#29)	03/01/62	169	UN	Coastal States Energy Co.	66	2	02/01/79	par	02/01/89	NM
UT	SL071561	Shakespeare	03/01/51	80	UP	Fulton, C.	50	2	08/01/74	ind	08/04/86	NU
UT	U0141177	Skumpah	03/01/67	2504	UN	Energy Reserves Group, Inc.	100	1	03/01/79	ind	03/01/89	NM
UT	U2810	Smith-Holladay (#16)	08/01/33	80	UN	Smith-Holladay Associates	100	1	01/01/78	ind	01/01/88	NU
UT	U0118366	South Nipple Butte	11/01/65	1920	UN	Niko Bell Mining & Oil Co.	50	2	01/01/79	ind	01/01/89	NM
UT	U0120794	South Nipple Butte	03/01/66	1920	UN	Niko Bell Mining & Oil Co.	50	2	01/01/79	ind	01/01/89	NM
UT	U0146654	South Nipple Butte	12/01/65	2560	UN	Niko Bell Mining & Oil Co.	50	2	01/01/79	ind	01/01/89	NM
UT	U47973	Truck Canyon	11/01/82	161	UN	Bishopsgate Coal Corp.	100	1	11/01/82	den	11/01/92	OO
UT	SL062605	Utah No. 2 (#4)	03/17/39	1053	UP	Kanawha & Hocking Coal & Coke	100	1	09/01/73	ind	08/04/86	NU
UT	U5135	Ute 1&2	05/01/77	8824	UN	Mountain States Resource Corp.	100	1	08/31/77	den	08/31/87	OO
UT	U0103141	West	09/01/67	961	UN	West, S.	100	1	09/01/67	den	08/04/86	NU
UT	SL036407	Wilberg (#12)	09/10/26	80	UP	Wilberg, C.	100	1	05/29/40	ind	08/04/86	NU
VA	ES24616	Clinchfield	11/07/82	251	AA	Clinchfield Coal	100	1	11/07/82	den	11/07/92	YM
WA	WASH04322	Centralia	11/01/61	280	AA	Washington Irrigation & Develo	50	2	11/01/61	den	08/04/86	YM
WA	OR6527	Centralia	04/01/71	241	AA	Washington Irrigation & Develo	50	2	04/01/71	den	08/04/86	YM
WY	W0321780	Antelope	12/01/66	2908	AS	Antelope Coal Co.	100	1	12/01/66	den	08/04/86	QM
WY	W0322255	Antelope	12/01/66	1869	AS	Antelope Coal Co.	100	1	06/01/68	ind	08/04/86	QM
WY	B031719	Antelope	11/22/32	40	AS	Resource Development Co.	100	1	05/01/79	ind	05/01/89	QM
WY	W0317682	Belle Ayr	09/01/65	2360	AA	Meadowlark Farms	100	1	09/01/65	den	08/04/86	YM
WY	W72282	Belle Ayr	09/01/80	41	AA	Meadowlark Farms	100	1	09/01/80	den	09/01/90	OO

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WY	W80954	Belle Ayr (Cheyenne ex)	10/01/82	1433	AA	Meadowlark Farms, Inc.	100	1	10/01/82	den	10/01/92	00
WY	W78629	Belle Ayr (S.Ducknest)	09/01/82	1154	AA	Meadowlark Farms, Inc.	100	1	09/01/82	den	09/01/92	00
WY	W69981	Bighorn?	04/01/82	360	AA	Big Horn Coal Co.	100	1	04/01/82	den	04/01/92	00
WY	W6266	Black Butte	04/01/76	14902	AA	Black Butte Coal Co.	100	1	04/01/76	den	08/04/86	YM
WY	W2313	Black Thunder	12/01/66	5844	AA	Thunder Basin Coal Co.	100	1	07/01/68	ind	08/04/86	YM
WY	W36094	Black Thunder	12/01/66	40	AA	Thunder Basin Coal Co.	100	1	07/25/72	seg	08/04/86	YM
WY	W0325878	Buckskin	11/01/67	599	AA	Shell Oil Corp.	100	1	05/01/75	ind	08/04/86	YM
WY	W78634	Buckskin (Spring Draw)	09/01/82	3687	AA	Shell Oil Corp.	100	1	09/01/82	den	09/01/92	00
WY	W3397	Caballo	12/01/67	5280	AA	Exxon Coal USA	100	1	12/01/67	den	08/04/86	YL
WY	W49644	Caballo	09/01/65	80	AA	Exxon Coal USA	100	1	03/01/75	seg	08/04/86	YL
WY	W83394	Caballo I-90 exchange	12/01/67	1640	AA	Exxon Coal Resources USA, Inc.	100	1	01/28/83	den	01/28/93	YL
WY	W0150169	Carbon #1	01/01/64	640	AI	Ark Land Co.	100	1	01/01/71	ind	08/04/86	QC
WY	W054728	Carbon #1	01/01/61	640	AI	Ark Land Co.	100	1	01/01/71	ind	08/04/86	QC
WY	W3446	Coal Creek	11/01/67	5806	AA	Thunder Basin Coal Co.	100	1	11/01/67	den	08/04/86	YL
WY	W8385	Cordero	03/01/71	6560	AA	Sunoco Energy Development Co.	100	1	03/01/71	den	08/04/86	YM
WY	C054769	Dave Johnston	05/31/33	120	AA	Pacific Power & Light Co.	100	1	01/01/66	ind	08/04/86	YM
WY	W0244167	Dave Johnston	06/01/63	1803	AA	Pacific Power & Light Co.	100	1	06/01/63	den	08/04/86	YM
WY	W0312918	Dave Johnston	06/01/65	3779	AA	Pacific Power & Light Co.	100	1	06/01/65	den	08/04/86	YM
WY	W038597	Dave Johnston	08/01/58	1400	AA	Pacific Power & Light Co.	100	1	08/01/58	den	08/04/86	YM
WY	W038602	Dave Johnston	06/01/56	2000	AA	Pacific Power & Light Co.	100	1	06/01/56	den	08/04/86	YM
WY	W041355	Dave Johnston	07/02/56	560	AA	Pacific Power & Light Co.	100	1	07/02/56	den	08/04/86	YM
WY	W0311810	E. Gillette	01/01/70	1263	AN	Kerr-McGee Coal Co.	100	1	01/01/70	den	08/04/86	QC
WY	W0312311	E. Gillette	07/01/65	880	AN	Kerr-McGee Coal Co.	100	1	07/01/65	den	08/04/86	QC
WY	W0313668	E. Gillette	10/01/65	2200	AN	Kerr-McGee Coal Co.	100	1	10/01/65	den	08/04/86	QC
WY	W0313773	Eagle Butte	09/01/65	3520	AA	Meadowlark Farms	100	1	09/01/65	den	08/04/86	YM
WY	W5035	Fort Union (S. Rawhide)	12/01/67	1913	AA	Fort Union Mine Partnership	100	1	10/01/83	ind	10/01/93	QM
WY	W23928	Jacobs Ranch	09/01/70	4192	AA	Kerr-McGee Coal Co.	100	1	09/01/70	den	08/04/86	YM
WY	W24710	Jacobs Ranch	09/01/70	160	AA	Kerr-McGee Coal Co.	100	1	09/01/70	den	08/04/86	YM
WY	W0313558	Jim Bridger	01/01/68	4276	AA	Bridger Coal Co.	100	1	01/01/68	den	08/04/86	YM
WY	W2727	Jim Bridger	10/01/68	2880	AA	Bridger Coal Co.	100	1	10/01/69	den	08/04/86	YM
WY	W2728	Jim Bridger	10/01/69	1280	AA	Bridger Coal Co.	100	1	10/01/69	den	08/04/86	YM
WY	W78635	Keeline	09/01/82	3238	AN	Neil Butte Co.	100	1	09/01/82	den	09/01/92	00
WY	W055246	Kemmerer	03/01/58	2401	AA	Gulf Oil	100	1	03/01/58	den	08/04/86	YM
WY	W075207	Kemmerer	01/02/59	714	AA	Gulf Oil Corp.	100	1	02/01/59	den	08/04/86	YM
WY	W0294513	Kemmerer	07/01/64	519	AA	Gulf Oil Corp.	100	1	07/01/64	den	08/04/86	YM
WY	W056471	Kemmerer	04/01/62	960	AA	Gulf Oil Corp.	100	1	04/01/62	den	08/04/86	YM
WY	W060274	Kemmerer	02/01/63	745	AA	Gulf Oil Corp.	100	1	02/01/63	den	08/04/86	YM
WY	W78631	Little Rawhide	09/01/82	530	AA	Meadowlark Farms, Inc.	100	1	09/01/82	den	09/01/92	00
WY	W42554	Medicine Bow	02/01/71	1280	AA	Medicine Bow Coal Co.	100	1	01/01/74	seg	08/04/86	YM
WY	W58095	Medicine Bow	10/01/80	1288	AA	Medicine Bow Coal Co.	100	1	10/01/80	den	10/01/90	00
WY	W72989	Medicine Bow	09/01/81	4443	AA	Medicine Bow Coal Co.	100	1	09/01/81	den	09/01/91	00

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WY	W60231	N. Antelope	12/01/66	320	AA	North Antelope Coal Co.	100	1	12/01/66	den	08/04/86	YM
WY	W87364	N. Antelope (Rochelle seg	12/01/66	1040	AA	North Antelope Coal Co.	100	1	11/01/83	seg	11/01/93	YM
WY	W71692	N. Rochelle	12/01/66	2000	AS	Shell Oil Corp.	100	1	07/01/80	seg	07/01/90	QM
WY	W0136194	Phillips Creek 1	06/01/61	322	AA	Pacific Power & Light Co.	100	1	11/01/81	ind	11/01/91	YM
WY	W0136195	Phillips Creek 1	06/01/61	1477	AA	Pacific Power & Light Co.	100	1	11/01/81	ind	11/01/91	YM
WY	W0136196	Phillips Creek 1	06/01/61	1560	AA	Pacific Power & Light Co.	100	1	11/01/81	ind	11/01/91	YM
WY	W0324701	Phillips Creek 1	02/01/70	680	AA	Pacific Power & Light Co.	100	1	11/01/81	ind	11/01/91	YM
WY	W5036	Rawhide	12/01/67	5697	AA	Exxon Coal USA	100	1	12/01/67	den	08/04/86	YM
WY	W77235	Rawhide (Peabody seg.)	12/01/67	480	AA	Peabody Coal Co.	100	1	09/01/81	seg	09/01/91	YM
WY	W83395	Rawhide I-90 exchange	12/01/67	560	AA	Exxon Coal Resources USA, Inc.	100	1	01/28/83	den	01/28/93	YM
WY	W0321779	Rochelle	12/01/66	7822	AS	Peabody Coal Co.	100	1	12/01/66	den	08/04/86	NM
WY	W37829	Rochelle	12/01/66	40	AS	Powder River Coal Co.	100	1	12/09/72	seg	08/04/86	NM
WY	W23929	Rojo Caballos	02/01/71	3959	AA	Mobil Coal Resources Co.	100	1	02/01/71	den	08/04/86	YL
WY	C057086	Rosebud	04/05/35	1273	AA	Rosebud Coal Sales	100	1	03/01/65	ind	08/04/86	YM
WY	W48330	Rosebud	02/01/80	130	AA	Rosebud Coal Sales	100	1	02/01/80	den	02/01/90	OO
WY	W72991	Rosebud	09/01/81	3010	AA	Ark Land Co.	100	1	09/01/81	den	09/01/91	OO
WY	W23411	Rosebud?	04/01/83	5078	AA	Rosebud Coal Sales Co.	100	1	04/01/83	den	04/01/93	OO
WY	W060241	S. Haystack	03/01/63	1408	AN	Cumberland Coal Co.	100	1	03/01/77	ind	03/01/87	QM
WY	W022978	Sand Draw (W.Nuclear)	08/01/54	80	AA	Resource Exploration & Mining	100	1	04/01/80	ind	04/01/90	QM
WY	W16466	Seminoe #1	02/01/71	6315	AM	Ark Land Co.	100	1	02/01/71	den	08/04/86	YD
WY	C033800	Seminoe #2	10/08/24	398	AA	Ark Land Co.	100	1	09/01/71	ind	08/04/86	YM
WY	C078051	Seminoe #2	05/01/51	160	AA	Ark Land Co.	100	1	01/01/74	ind	08/04/86	YM
WY	W0146199	Seminoe #2	01/01/64	640	AA	Ark Land Co.	100	1	01/01/71	ind	08/04/86	YM
WY	W054727	Seminoe #2	11/01/61	1264	AA	Ark Land Co.	100	1	01/01/71	ind	08/04/86	YM
WY	W054737	Seminoe #2	11/01/61	320	AA	Ark Land Co.	100	1	01/01/71	ind	08/04/86	YM
WY	W31258	Seminoe #2	05/01/51	160	AA	Ark Land Co.	100	1	10/08/71	seg	08/04/86	YM
WY	W49338	Seminoe #2	08/01/80	735	AA	Ark Land Co.	100	1	08/01/80	den	08/01/90	OO
WY	W061421	Skull Point	03/01/63	1280	AA	FMC Corp.	100	1	03/01/63	den	08/04/86	QC
WY	W061422	Skull Point	03/01/63	1921	AA	FMC Corp.	100	1	06/01/63	den	08/04/86	QC
WY	W12793	Stansbury	06/01/70	1645	AI	Winton Coal Co.	100	1	05/01/75	ind	11/01/92	YM
WY	W16465	Vanguard #2	09/01/69	8683	AI	Energy Development Co.	100	1	09/01/69	den	08/04/86	YM
WY	W0111833	Wyodak	04/01/61	40	AA	Wyodak Resource Development Co	100	1	09/28/83	den	09/28/93	YM
WY	W0313666	Wyodak	10/01/65	1360	AA	Wyodak Resource Development Co	100	1	09/28/83	den	09/28/93	YM
WY	W073289	Wyodak	05/01/59	240	AA	Wyodak Resource Development Co	100	1	05/01/59	den	08/04/86	YM
WY	W78630	Wyodak	03/01/83	320	AA	Wyodak Resources Dev. Corp.	100	1	03/01/83	den	03/01/93	OO
WY	W85379	Wyodak I-90 exchange	04/01/61	240	AA	Wyodak Resources Dev. Corp.	100	1	09/28/83	den	09/28/93	YM
WY	W0271199	Dry Fork	12/01/67	640	PN	Phillips Petroleum Corp.	100	1	08/01/83	ind	08/01/93	NM
WY	W0271200	Dry Fork	12/01/67	760	PN	Phillips Petroleum Corp.	100	1	08/01/83	ind	08/01/93	NM
WY	W0271201	Dry Fork	12/01/67	2180	PN	Phillips Petroleum Corp.	100	1	08/01/83	ind	08/01/93	NM
WY	W0236507	Arvada	03/01/65	195	R	Gulf Oil Corp.	100	1	/ /	rel	/ /	OO
WY	W0236621	Arvada	06/01/63	2551	R	Gulf Oil Corp.	100	1	/ /	rel	/ /	OO

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DEVELOPMENT STATUS OF FEDERAL COAL LEASES

STATE	SERIAL	BLOCK OR MINE NAME	DATE ISSUED	ACRES	DEV. STATUS	LESSEE #1	PCT	NO. LESSEES	DATE ACQUIRED	HOW ACQUIRED	SEC. 3 DATE	SEC. 3 STATUS
WY	W0240559	Arvada	09/01/63	1620	R	Gulf Oil Corp.	100	1	/ /	rel	/ /	OO
WY	W0220486	Boar's Tusk	04/01/67	1840	RP	Peabody Coal Co.	100	1	11/01/68	ind	08/04/86	OO
WY	W3438	Boar's Tusk	03/01/70	640	RP	Peabody Coal Co.	100	1	03/01/70	den	08/04/86	OO
WY	W0313667	East Wyodak	10/01/65	2560	RP	Powder River Coal Co.	100	1	12/01/73	ind	08/04/86	OO
WY	E019039	Granite Creek	03/11/41	280	R	Granite Creek Coal & Uranium	100	1	/ /	rel	/ /	OO
WY	E015155	Rainbow #8	09/19/27	1752	R	Sweetwater Resources, Inc.	100	1	/ /	rel	/ /	OO
WY	W58112	Rojo Caballos	02/01/71	0	RC	Mobil Coal Resources Co.	100	1	02/01/71	den	08/04/86	OO
WY	W72990	?	06/01/81	1832	UN	Capital Development Co.	100	1	06/01/81	den	06/01/91	OO
WY	B025369	Armstrong	05/17/30	80	UP	Big Horn Coal Co.	100	1	11/01/59	ind	08/04/86	NU
WY	W961	Bass	12/01/67	20701	UN	Bass, R. & Bass Trusts	100	1	12/01/67	den	08/04/86	NU
WY	W0322794	Belco	01/01/70	4551	UN	Belco Petroleum Corp.	100	1	07/01/70	ind	08/04/86	NU
WY	B037423	Blue Diamond	02/22/44	40	UN	Wyodak Resource Development Co	100	1	12/01/56	ind	08/04/86	NU
WY	W0312917	Cherokee	04/01/67	480	UN	Resource Development Co.	100	1	04/01/67	den	08/04/86	NO
WY	W092141	Cherokee	07/01/62	2480	UN	Resource Development Co.	100	1	07/01/62	den	08/04/86	NO
WY	W0313559	Cherokee	06/01/65	640	UN	Resource Development Co.	100	1	06/01/65	den	08/04/86	NO
WY	W092140	Cherokee	07/01/62	671	UN	Resource Development Co.	100	1	07/01/62	den	08/04/86	NO
WY	W73096	China Butte	03/01/82	5974	UN	China Butte Coal Co.	100	1	03/01/82	den	03/01/92	OO
WY	E018804	Cottonwood	03/28/38	160	UN	Conotton Land Co.	100	1	09/01/80	ind	09/01/90	NU
WY	W023373	Deadman	02/01/58	240	UP	Conotton Land Co.	100	1	06/01/77	ind	06/01/87	NU
WY	W50061	Edison	07/01/82	7066	UN	Edison Development Co.	100	1	07/01/82	den	07/01/92	OO
WY	W0256663	Gulf 3	03/01/65	756	UN	Gulf Oil Corp.	100	1	11/01/75	ind	08/04/86	NU
WY	W25406	Hanna South	01/01/71	640	UN	Ark Land Co.	100	1	04/01/76	ind	08/04/86	NM
WY	C069111	Kowlok	12/01/45	120	UP	Northwestern Resources Co.	100	1	01/01/75	ind	08/04/86	NU
WY	W030052	Lake DeSmet	11/01/59	2203	UN	Texaco, Inc.	100	1	02/01/74	ind	08/04/86	NO
WY	W046349	Lake DeSmet	10/01/61	160	UN	Texaco, Inc.	100	1	02/01/74	ind	08/04/86	NO
WY	W051959	Lake DeSmet	08/01/57	320	UN	Texaco, Inc.	100	1	02/01/74	ind	08/04/86	NO
WY	W030009	Lake DeSmet	12/01/55	1913	UN	Texaco, Inc.	100	1	02/01/74	ind	08/04/86	NO
WY	W0321120	Lake DeSmet	05/01/66	4821	UN	Texaco, Inc.	100	1	02/01/74	ind	08/04/86	NO
WY	W0313201	Long Canyon	07/01/68	14680	UN	Sweetwater Resources, Inc.	100	1	06/01/80	ind	06/01/90	NM
WY	W075206	N. North Block	01/02/59	1247	UN	Gulf Oil Corp.	100	1	02/01/59	den	08/04/86	NU
WY	W0310712	Phillips Creek 2	12/01/66	40	UN	Pacific Power & Light Co.	100	1	11/01/81	ind	11/01/91	NU
WY	W78633	Rocky Butte	02/01/83	4856	UN	Texas Energy Services, Inc.	50	2	02/01/83	den	02/01/93	OO
WY	W0220516	Wildcat	03/01/65	1571	UN	Gulf Oil Corp.	100	1	11/01/75	ind	08/04/86	NO

KEY TO ABBREVIATIONS AND ENTRIES IN OTA COAL LEASE DATA BASE

FIELD	CONTENTS
STATE	State where lease is located
SERIAL	Lease serial number in DOI records
BLOCK OR MINE NAME	Name of Mine or Lease Block used in OTA reports
DATE ISSUED	Date lease was originally issued
ACRES	Acres in Lease (current as of 1982)
DEV. STATUS	Development Status 1985 The first letter is the development status of the lease or the associated mine or lease block, the second letter is the current production status Ratings: AA = Approved SMCRA permit, mine is actively producing. AI = Approved permit, past production, mine is currently idle. AS = Approved permit, mine scheduled to begin producing under contracts. AN = Approved permit, no scheduled production, no contracts. AM = Approved permit, lease reserves mined out. PS = Pending permit, mine scheduled to produce under contract PN = Pending permit, no scheduled production, no contracts. UN = Undeveloped no active permit review. UP = Undeveloped, past coal production (before SMCRA). R = Undeveloped, relinquishment approved. RP = Undeveloped, relinquishment pending. RE = Relinquished in exchange for another lease.
LESSEE #1	First lessee in DOI lease records
PCT	Percent owned by Lessee #1
NO. LESSEES	Number of lease owners
DATE ACQUIRED	Date lease acquired by lessee #1 or corporate predecessor
HOW ACQUIRED	Method of acquisition by lessee #1 or corporate predecessor DEN = lease issued by DOI to lessee; IND = lease assigned to lessee by unrelated entity; SEG = lease transferred by segregation of an existing lease; PAR = partial interest in lease transferred to lessee by assignment
SEC. 3 DATE	Earliest section 3 deadline applicable to lease: generally 10 years after lease acquired by lessee or corporate predecessor in arm's-length

	transaction between unrelated parties (Corporate acquisitions do not restart section 3 clock).
SEC. 3 STATUS	Estimated section 3 Compliance Status as of section 3 date First letter is general rating, second letter provides reason for rating. YA = Lease likely to comply with section 3, actively producing >1% reserves. YS = Lease likely to comply because of scheduled production and contracts. YD = Lease likely to comply, reserves depleted. YL = Lease likely to comply by LMU formation with other federal leases. QM = Uncertain compliance status because of market conditions, existing regional capacity between 100 and 150% of projected demand. QC = Uncertain compliance status because of LMU formation with nonfederal coal and lack of contracts to sustain LMU production level of 2.5% /yr. QT = Uncertain compliance status because of lack of transportation to move coal to customers. NM = Lease unlikely to comply because of market conditions, existing regional capacity exceeds 150% of projected demand. NU = Lease unlikely to comply because of unfavorable development potential. OO = Lease not rated (post-FCLAA lease, insufficient information, relinquished lease).

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